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# DEP Documentation

# DEP/NMS User Manual

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| 04.04 | Anna Papayan | 26/04/2012 | Windows 7 support added. |
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# TABLE OF CONTENTS

**1. INTRODUCTION ..... 8**

1.1. SCOPE OF THE DOCUMENT ..... 8
1.2. RELATED DOCUMENTATION ..... 8
1.3. CONTACTING ATOS WORLDLINE ..... 8

**2. DEP/NMS FIELDS OF APPLICATION ..... 9**

2.1. DEP/NMS LITE ..... 9
2.2. DEP/NMS FULL ..... 10
2.3. DEP/NMS LOCAL ..... 10

**3. GETTING STARTED ..... 12**

3.1. INSTALLING THE APPLICATION ..... 12
3.2. STARTING UP ..... 12
3.3. PERFORMING INITIAL CONFIGURATION ..... 12
3.4. RESTARTING WITH CONFIGURATION DEFINED ..... 14
3.5. EXIT ..... 14

**4. HANDLING CONFIGURATION FILES ..... 16**

4.1. CREATING A NEW FILE ..... 16
4.2. OPENING AN EXISTING CONFIGURATION FILE ..... 16
4.3. OPENING AND MERGING FILE ..... 17
4.4. CLOSING A FILE ..... 18
4.5. SAVING A CONFIGURATION ..... 19

**5. PROVIDING PLATFORM INFORMATION ..... 20**

5.1. ADDING A PLATFORM ..... 20
*5.1.1. Identifying the platform ..... 20*
*5.1.2. Selecting Crypto Modules ..... 21*
*5.1.3. Updating the configuration ..... 22*
5.2. MODIFYING PLATFORM INFORMATION ..... 22
5.3. DELETING A PLATFORM FROM THE CONFIGURATION ..... 22
5.4. PLATFORMS ORDER ..... 23

**6. THE VIEW MENU ..... 24**

6.1. REFRESHING THE INFORMATION ..... 24
*6.1.1. Refreshing window globally ..... 24*
*6.1.2. Refreshing Item ..... 24*
6.2. VIEWING THE AUDIT TRAIL ..... 24
6.3. SHOWING/HIDING THE STATUS BAR ..... 26
6.4. SHOWING/HIDING THE TOOLBAR ..... 27

**7. MANAGING DEP PLATFORMS ..... 28**

7.1. HANDLING PLATFORM STATUS INFORMATION ..... 28
*7.1.1. Requesting status information ..... 28*
*7.1.2. Interpreting the platform status information ..... 29*
*7.1.3. Saving status information ..... 30*
*7.1.4. Modifying parameters ..... 30*
7.2. HANDLING PLATFORM LOCKING ..... 37

*7.2.1. Lock ..... 38*
*7.2.2. Unlock ..... 38*
*7.2.3. Forced Unlock ..... 38*
7.3. HANDLING TRACES ..... 39
*7.3.1. Activating the logging ..... 39*
*7.3.2. Stopping the logging ..... 39*
*7.3.3. Getting the trace file ..... 40*
7.4. MANAGING STATISTICS ..... 43
*7.4.1. Starting the statistics utility ..... 44*
*7.4.2. Stop the statistics utility ..... 44*
*7.4.3. Getting the statistics information ..... 44*

**8. MANAGING DEP CRYPTO MODULES ..... 47**

8.1. HANDLING MODULE STATUS INFORMATION ..... 47
*8.1.1. Requesting status information ..... 47*
*8.1.2. Interpreting module status information ..... 48*
*8.1.3. Saving status information ..... 49*
*8.1.4. Modifying configuration settings ..... 50*
8.2. HANDLING CRYPTO MODULE LOCKING ..... 51
*8.2.1. Lock ..... 52*
*8.2.2. Unlock ..... 52*
*8.2.3. Forced unlock ..... 52*
8.3. MANAGING APPLICATIONS ..... 52
*8.3.1. Loading application software on DEP Crypto Module(s) ..... 53*
*8.3.2. Ending an application ..... 58*
8.4. MANAGING KEYS ..... 59
*8.4.1. Backing up keys ..... 60*
*8.4.2. Restoring keys ..... 61*
*8.4.3. Changing the DMK ..... 65*
*8.4.4. Merging backups ..... 69*
8.5. READING DEP INFORMATION ..... 73
*8.5.1. Understanding information about keys ..... 75*
*8.5.2. Capabilities ..... 76*
*8.5.3. Counters ..... 77*
*8.5.4. Parameters ..... 78*
8.6. PERFORMING DIAGNOSTICS ..... 79
*8.6.1. Reading Diagnostics ..... 80*
*8.6.2. Testing Communication Hardware ..... 81*
*8.6.3. Performing DEP Self-Test ..... 82*
*8.6.4. Verifying the Keymac ..... 83*
*8.6.5. Reading DEP Alarm Information ..... 83*
8.7. RESETTING THE DEP PLATFORM OR ITS COMPONENTS ..... 85
*8.7.1. Managing the backup battery ..... 86*
*8.7.2. Resetting Communication to the DEP platform ..... 87*
*8.7.3. Resetting the DEP Crypto Module CPU ..... 88*
*8.7.4. Resetting the DEP Alarm Processor ..... 88*
8.8. MANAGING DEP PARAMETERS ..... 88
*8.8.1. Modifying DEP parameters ..... 90*
*8.8.2. Adding a parameter instance ..... 91*
*8.8.3. Deleting a parameter instance ..... 92*
*8.8.4. Backing up parameters ..... 93*

*8.8.5. Restoring parameters ..... 94*

**9. DEP SOFTWARE CLONING ..... 95**

9.1. PREREQUISITES ..... 95
9.2. SETTING AS MASTER ..... 95
9.3. UNSET MASTER ..... 96
9.4. SETTING AS CLONE ..... 97
9.5. UNSET CLONE ..... 98
9.6. UNSELECT ALL ..... 99
9.7. START CLONING PROCESS ..... 99
*9.7.1. Cloning the Master DMK ..... 99*
*9.7.2. Customer Administrators authentication on Master and KAWL Checking 100*
*9.7.3. Cloning progress dialog ..... 102*
*9.7.4. Cloning summary ..... 103*
9.8. RESET MASTER/CLONE ..... 104

**10. FIRMWARE UPGRADE ..... 105**

10.1. BIOS REFLASH ..... 105
10.2. UPGRADE BANKSYS CRYPTO ..... 107
*10.2.1. Prerequisites ..... 107*
*10.2.2. Starting the Banksys Crypto Upgrade ..... 108*

**11. TOOLS ..... 116**

11.1. GENERAL SETTINGS ..... 116
*11.1.1. Automatic refresh ..... 117*
*11.1.2. Event Manager ..... 117*
*11.1.3. C-ZAM/DEP ..... 118*
11.2. MANAGING PASSWORDS ..... 118
*11.2.1. Understanding security levels ..... 118*
*11.2.2. Entering a password ..... 120*
*11.2.3. Modifying a password ..... 121*
11.3. TESTING LAN CONNECTION TO THE HOST ..... 122
11.4. SENDING A CALL TO A CRYPTO MODULE ..... 123

**12. WORKING WITH PLUG INS ..... 125**

12.1. ADDING PLUG INS ..... 125
12.2. ORGANISING PLUG INS ..... 127
12.3. USING PLUG INS ..... 127

**13. OBTAINING HELP ..... 129**

13.1. CONSULTING THE ONLINE HELP ..... 129
13.2. OBTAINING INFORMATION ON DEP/NMS ..... 129

**14. ANNEX A: INSTALLATION PROCEDURE ..... 131**

14.1. DEP/NMS AND DEP/EM INSTALLATION ..... 131
*14.1.1. Selecting the installation folder ..... 132*
*14.1.2. Confirming installation ..... 133*
*14.1.3. Installing… ..... 133*
*14.1.4. Installation Complete ..... 134*
14.2. LICENSE DONGLE INSTALLATION ..... 134

*14.2.1. Performing preliminary steps ..... 135*
*14.2.2. Finishing the actual installation ..... 136*

**15. ANNEX B: FUNCTION KEYS AND SHORTCUTS ..... 138**

**16. ANNEX C: AUDIT TRAIL OPERATIONS AND EVENTS ..... 138**

# 1. INTRODUCTION

## 1.1. SCOPE OF THE DOCUMENT

This document describes the version 3.x of the DEP/NMS (*Network Management System*) application. This PC application allows the management and configuration of DEP Platforms and the DEP Crypto Modules. It can be linked to the DEP/EM application (*Event Manager*) to which it sends its events.

For information on the use of DEP/EM, refer to the document *DEP/EM User Manual*.

## 1.2. RELATED DOCUMENTATION

Information about the various *DEP*-products, technologies, and solutions is available from an extensive set of documents accompanying these products.

People new to *Atos Worldline*' *DEP* technology, may find it beneficial to read these three document:

- *DEP – Introduction to DEP*
- *DEP Glossary*

With respect to the DEP/NMS, the documents that are of particular interest are the following:

- *DEP EM User Manual*
- *DEP C-ZAM/DEP User Manual*
- *DEP NT Installation Guide*
- *DEP Host Interface Protocol*

There are no references made to the following documents, but they could be useful to understand this document.

- *DEP Introduction to DEP*
- *DEP General Architecture*
- *DEP Glossary*
- *DEP T6 Owner's Manual*

## 1.3. CONTACTING ATOS WORLDLINE

You can visit *Atos Worldline* on the World Wide Web to find out about new products and about various other fields of interest.
URL: http://www.Atos Worldline.be

For documentation or support on issues related to DEP, customers, partners, resellers, and distributors can send an email to the DEP Hotline:
dephotline-atosworldline@atosorigin.com

# 2. DEP/NMS FIELDS OF APPLICATION

The main purpose of the DEP/NMS application is to manage a pool of DEP Platforms with several DEP Crypto Modules. It is intended for use on PCs with Windows 2000, XP, Windows Vista and Windows 7 operating system on it.

The DEP/NMS application has following versions of functioning:

- *lite*
- *full*
- *local*

***Note:***

Only one executable exists; the difference between the *lite/full/local* versions is determined by external parameters.

## 2.1. DEP/NMS LITE

Starting the DEP/NMS *without* the hardware licence USB dongle, launches the "Lite version" of the application.

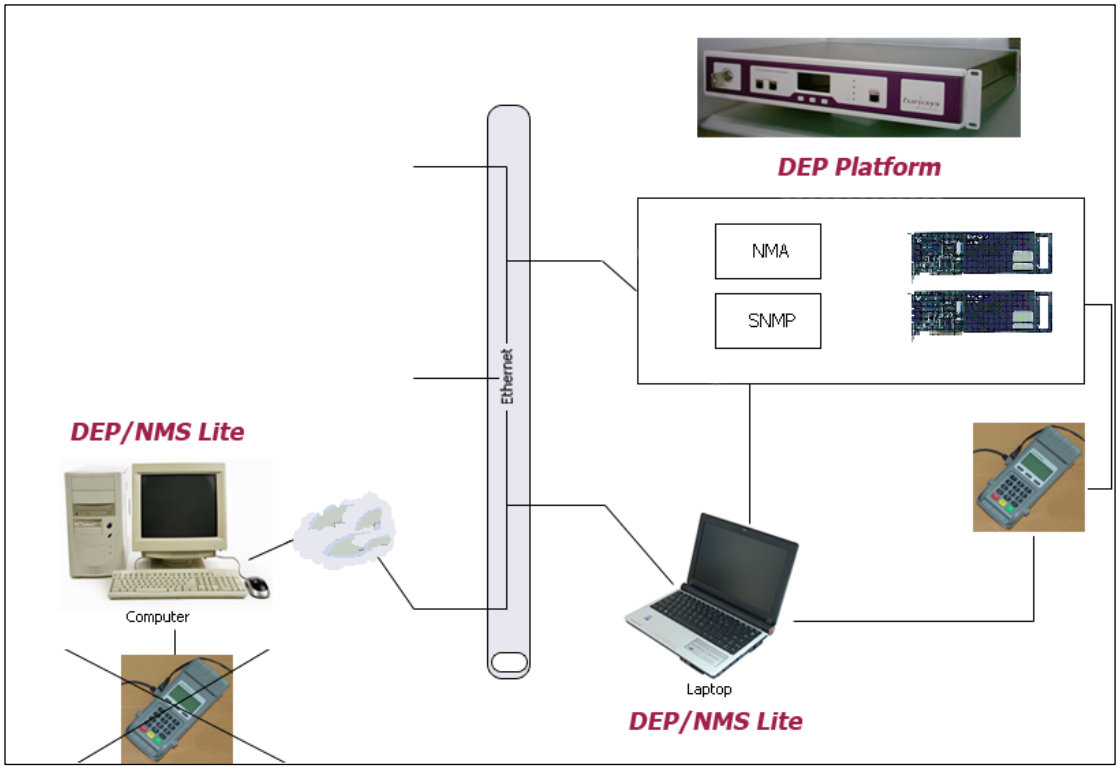



*Figure 1:* **DEP/NMS** *Lite configuration*

In this Lite version of DEP/NMS application, there is:

- no remote C-ZAM/DEP;
- limited management capability (maximum 5 DEP platforms);
- no "Automatic Refresh";
- no access to the "Plug Ins" functionality;

- no load in parallel functionalities (software & keys);
- Cloning functionalities allowed for TEST platforms (max 5 platforms).

## 2.2. DEP/NMS FULL

Starting DEP/NMS on a standard PC *with* the hardware licence USB dongle, launches the application in the "Full version".

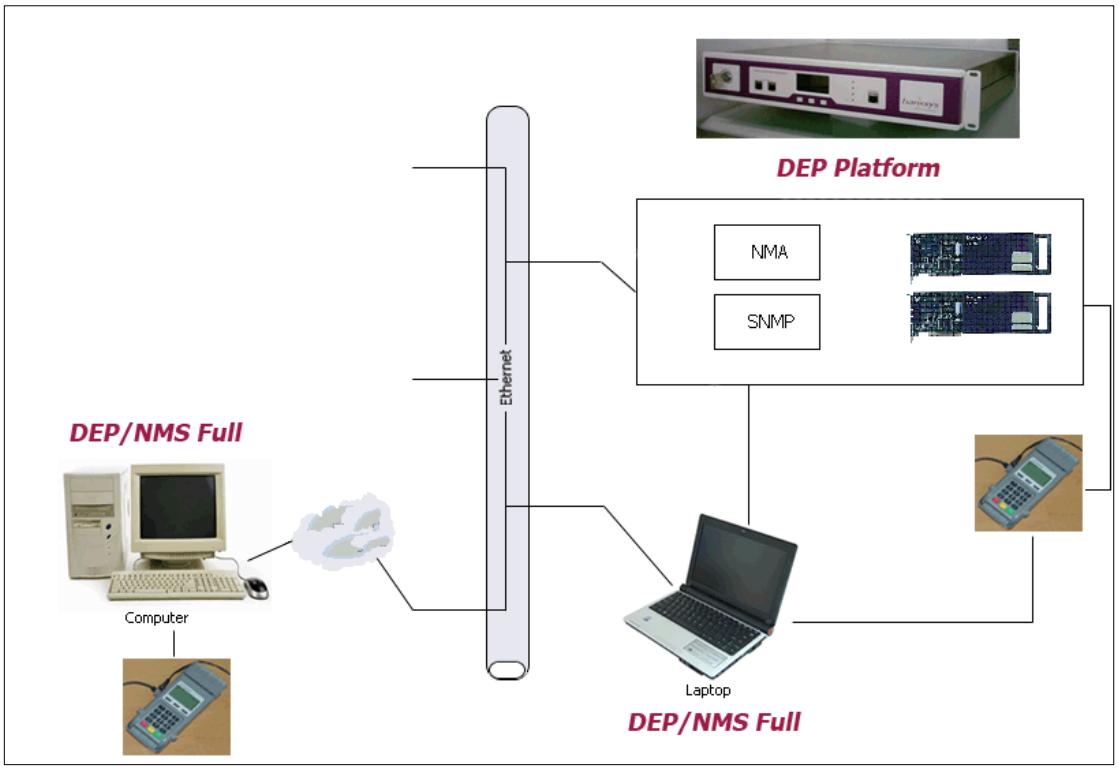



*Figure 2: DEP/NMS Full configuration*

In this version the full functionality is available:

- remote C-ZAM/DEP**;**
- unlimited DEP Platform management;
- Automatic Refresh;
- access to the "Plug Ins" functionality;
- full access to load in parallel functionalities (software & keys);
- full access to the Cloning functionalities.

***Note:***

The possibility to use the C-ZAM/DEP in remote mode will be available from version 1.4.2 of the C-ZAM/DEP software.

## 2.3. DEP/NMS LOCAL

When the DEP/NMS application is started on a **DEP/XP** platform, the local platform is automatically detected and appears in the platform list on the general window:

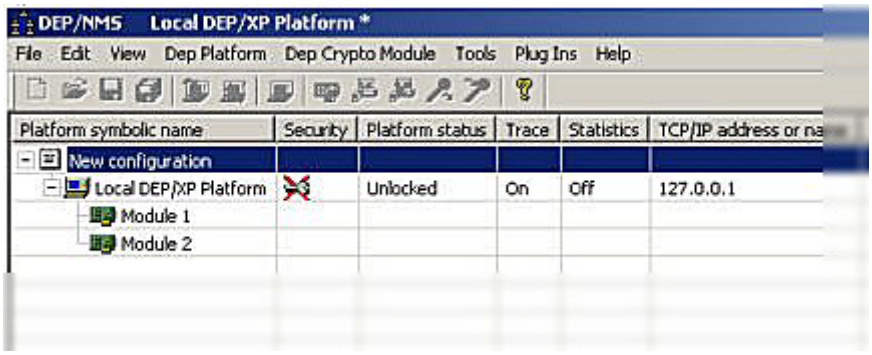



*Figure 3*

This version has limited functionality to avoid performance deterioration of the DEP platform.
The limitations are the following:

- Only the local platform can be managed.
- The commands in the **File** (except **Exit**) and **Edit** menus are disabled.

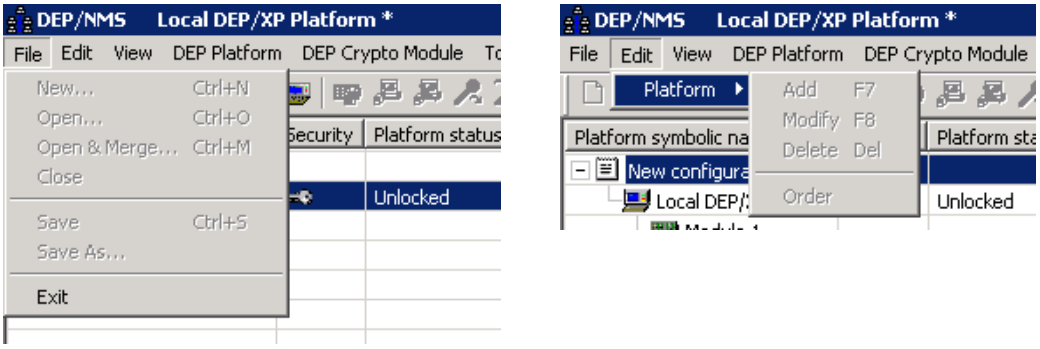



*Figure 4*

# 3. GETTING STARTED

## 3.1. INSTALLING THE APPLICATION

The installation procedure is described in detail in ANNEX A: INSTALLATION PROCEDURE.

## 3.2. STARTING UP

To start DEP/NMS application execute the DEP_NMS.exe file which is in `<Installation directory>\... folder`.
After installation, a desktop shortcut to this file is available as well as an entry in the Windows **Start** menu.

## 3.3. PERFORMING INITIAL CONFIGURATION

When the DEP/NMS is started for the very first time or when it is restarted without a configuration file being available, the main window of the application appears with no client platforms in the list.

The **General Settings** dialog box automatically appears, giving the possibility to define some initial settings for the DEP/NMS.

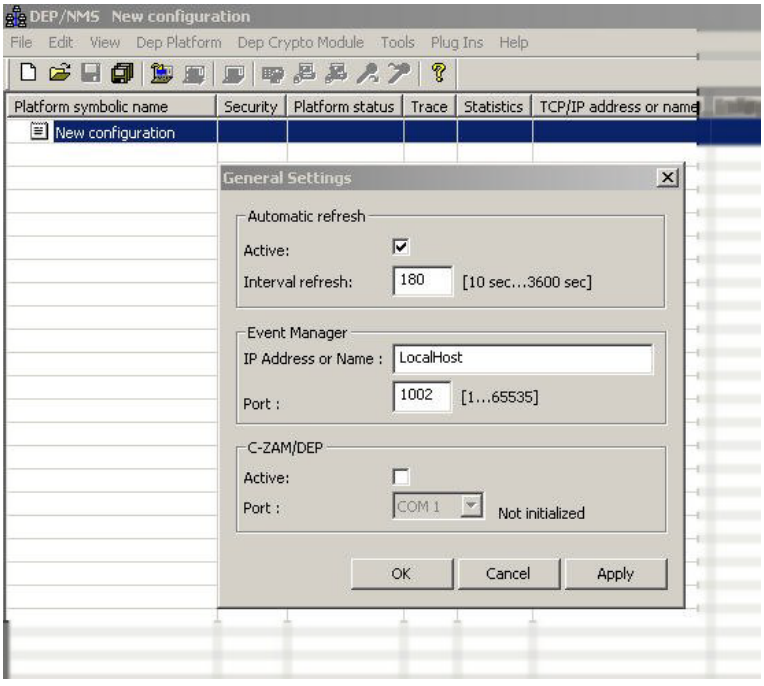



*Figure 5*

For more detailed information, refer to the section **General Settings** on page 116.

Once you have completed the **General Settings**, you can start adding DEP Platforms to the configuration. Available DEP Crypto Modules are displayed sequentially.
The date and time of the last refresh is indicated in the status bar of the window.

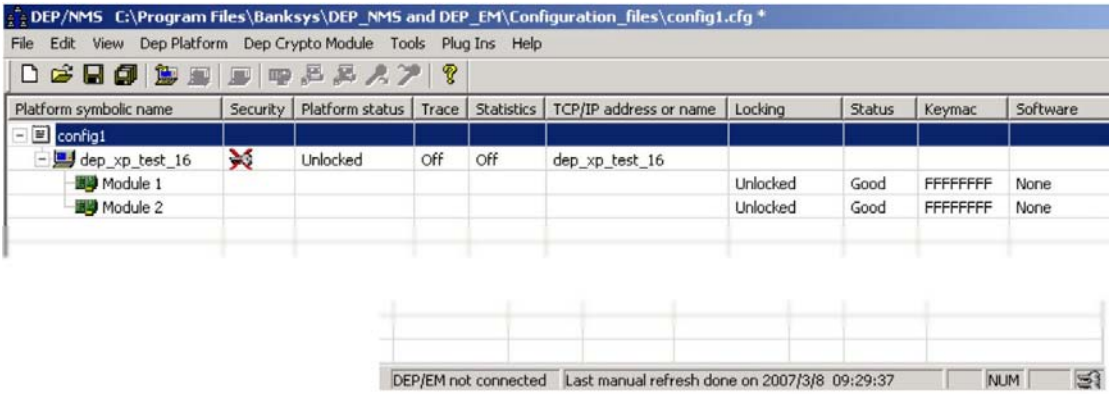

DEP/NMS C:\Program Files\Banksys\DEP_NMS and DEP_EM\Configuration_files\config1.cfg *
File Edit View Dep Platform Dep Crypto Module Tools Plug Ins Help
Platform symbolic name | Security | Platform status | Trace | Statistics | TCP/IP address or name | Locking | Status | Keymac | Software
config1
dep_xp_test_16 | Unlocked | Off | Off | dep_xp_test_16
Module 1 | Unlocked | Good | FFFFFFFF | None
Module 2 | Unlocked | Good | FFFFFFFF | None
DEP/EM not connected
Last manual refresh done on 2007/3/8 09:29:37
NUM

*Figure 6*

Operations that you perform from within the DEP/NMS main window are carried out on the selected DEP platform or DEP Crypto Module.

***Warning:***

If you perform an operation via a C-ZAM/DEP, it is carried out only on the selected DEP Crypto Module. If none is selected, the following error box will appear:

There are several different items for refreshing in the **View** menu; it will implement a manual refresh of the whole content of the main window (See **General Settings** section on page 116).

When a problem is encountered, the DEP/NMS alerts the Operator by means of a modification in the columns **Platform Status** and **Module Status**. Alarms can pop up while requesting the **Status** or as a result of various DEP/NMS functions with a bad answer of the selected DEP platform or DEP Crypto Module. If an alarm is raised, the icon changes and the corresponding line become red:

DEP/NMS New configuration *
File Edit View Dep Platform Dep Crypto Module Tools Plug Ins Help
Platform symbolic name | Security | Platform status | Trace | Statistics | TCP/IP address ... | Locking | Status | Keymac | Software | Mode | Authority | Serial Number
New configuration
dep_xp_test_16 | Unlocked | Off | Off | dep_xp_test_16
Module 1 | Unlocked | Good | FFFFFFFF | None | None | None | 0001000007A44699B2
Module 2 | Unlocked | Alarm: Battery | FFFFFFFF | None | None | None | 0000000000000000

If the event manager TCP/IP address and port are defined, the error messages are also sent to the corresponding machine (see *DEP EM User Manual*).

## 3.4. RESTARTING WITH CONFIGURATION DEFINED

When you (re)start DEP/NMS after having defined a configuration, the main window of the application appears with the information as it has been specified in the configuration file that was last used.

DEP/NMS C:\Program Files\Banksys\DEP_NMS and DEP_EM\Configuration_files\config1.cfg
File Edit View Dep Platform Dep Crypto Module Tools Plug Ins Help
Platform symbolic name | Security | Platform status | Trace | Statistics | TCP/IP address ... | Locking | Status | Keymac | Software | Mode | Authority | Serial Number
config1.cfg
dep_xp_test_16 Unlocked Off Off dep_xp_test_16
Module 1 Unlocked Good FFFFFFFF None None None 00010000074A44699B2
Module 2 Unlocked Alarm: Battery FFFFFFFF None None None 00000000000000000
dep_xp_test_15 Unlocked Off Off 172.24.14.237
Module 1 Locked Good FFFFFFFF None None None 00000000000000000
Module 2 Unlocked Good FFFFFFFF None None None 00000000000000000
Module 3 Unlocked Good FFFFFFFF None None None 00000000000000000
Module 4 Unlocked Good FFFFFFFF None None None 000100000B658391EE

The **File** menu contains a list of the last five configuration files that have been opened and/or edited. You can load a configuration file from that list by clicking it.

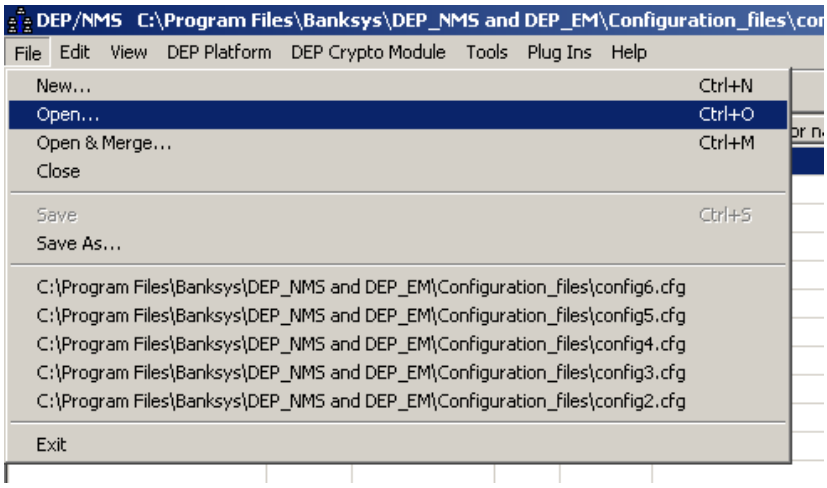



*Figure 7*

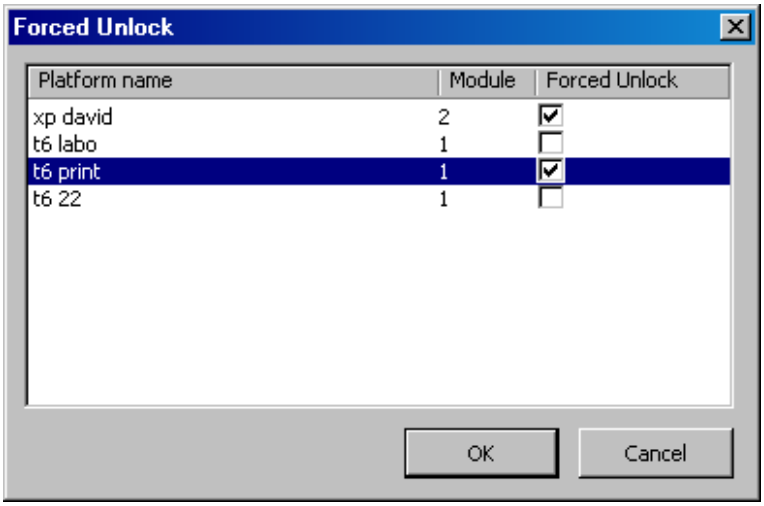
## 3.5. EXIT

To close the DEP/NMS application click on the **Exit** command in the **File** menu.

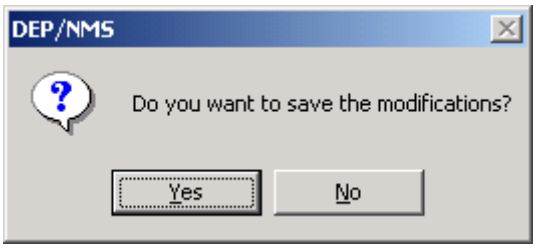
Before the application actually closes, the following operations may (have to) be performed.

If the user has locked some platforms or modules, you have the opportunity to unlock them. The **Forced Unlock** dialog box appears, containing the list of the locked items. Select the items that you wish to unlock before exiting.

For more information about locking and unlocking items, refer to the section **Handling Platform Locking** on page 37.




Additionally, if you have modified the configuration, the application displays a dialog box that prompts you to save the modifications before exiting.




The properties of the DEP/NMS application and the last saved configuration will automatically be used at the next start-up, except for the version installed on a DEP/XP platform.

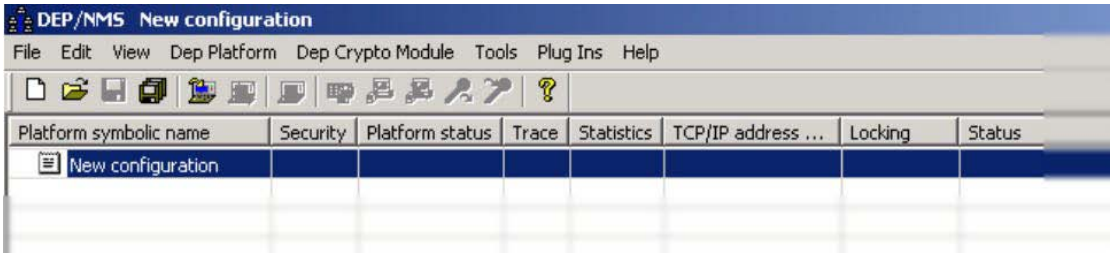
# 4. HANDLING CONFIGURATION FILES

A configuration file contains information about a group of DEP Platforms and DEP Crypto Modules that are to be managed at the same time by DEP/NMS. Configuration files have an extension `.CFG`.

DEP/NMS can handle only one configuration at the time.

## 4.1. CREATING A NEW FILE

To create a configuration file, use the **New** function from the **File** menu. Also you can click the icon or use the equivalent `Ctrl+N` keyboard shortcut.
Doing so closes the current configuration, if any, empties the main window of the application and opens a new empty configuration.



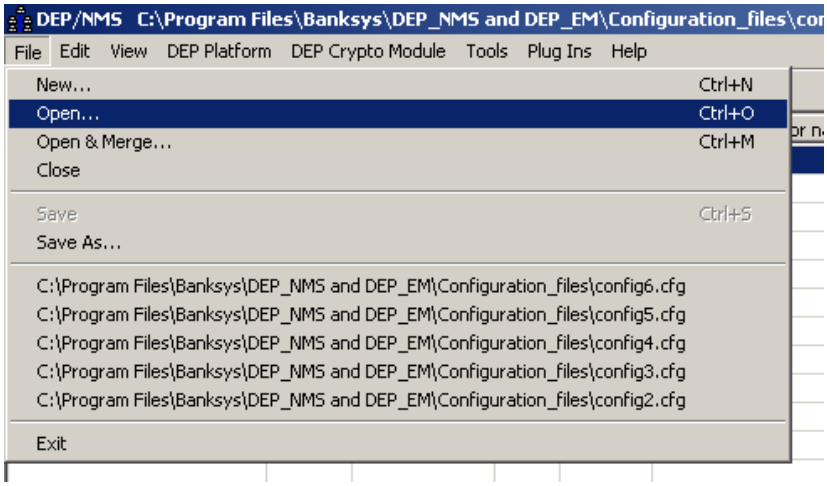

If you have modified the current configuration, you will be prompted to save the changes, before the new configuration opens.

## 4.2. OPENING AN EXISTING CONFIGURATION FILE

To load an existing configuration file, use the **Open** function from the **File** menu. Also you can click the icon or use the equivalent `Ctrl+O` keyboard shortcut.

By default, for Windows 2000 and Windows XP the configuration files are saved in the `Configuration_files` subfolder with "`C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM`" path, and for Windows Vista and Windows 7 with "`C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM`" respectively.

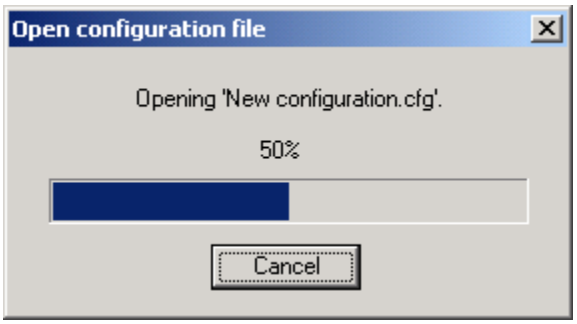
If the configuration file that you wish to open appears in the list of the five recently opened files in the **File** menu, you can open it from there by clicking its name.




The **Open** dialog box appears with a list of the available DEP/NMS configuration files, from which you can choose the appropriate one.

If you have modified the current configuration, you will be prompted to save the changes, before the new configuration opens.

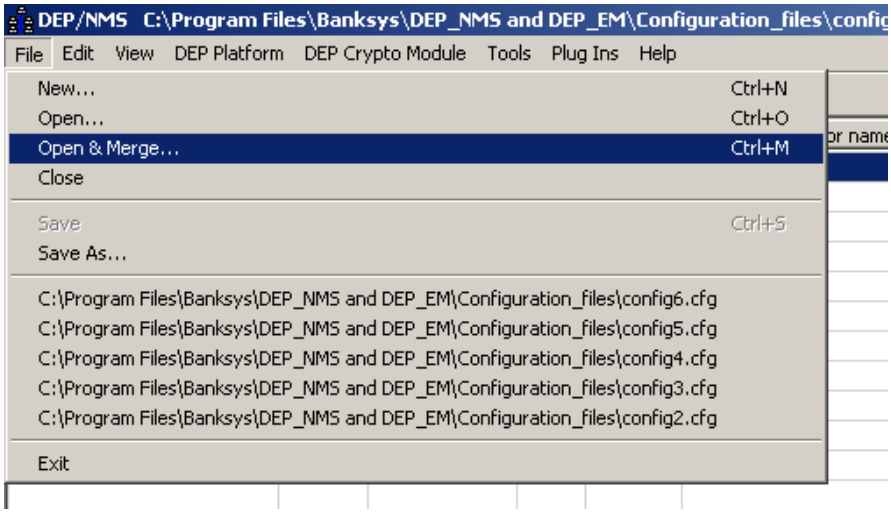
Depending on the size and the complexity of the configuration, loading the file may take a few moments. Progress is shown on the **Open configuration file** message box.




If the chosen file is not a *valid* DEP/NMS configuration file, an error box appears to inform that the configuration file is corrupted:

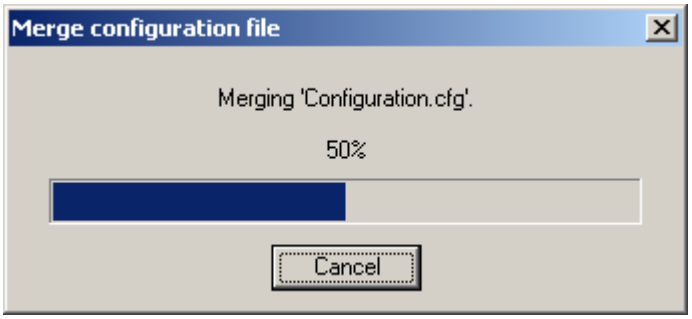
## 4.3. OPENING AND MERGING FILE

The DEP/NMS application allows to open and merge the configuration files. To open and merge a configuration file, use the **Open & Merge** function from the **File** menu or use the equivalent `Ctrl+M` keyboard shortcut.

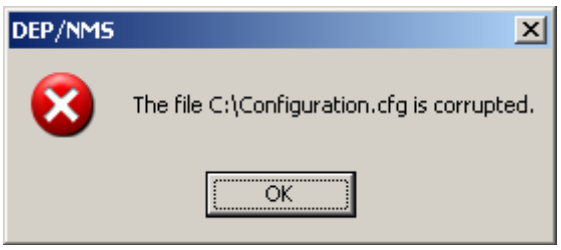



The **Open** dialog box appears with a list of the available DEP/NMS configuration files, from which you can choose the appropriate one.

Depending on the size and the complexity of the configuration, loading the file may take a few moments. The **Merge configuration file** dialog box displays the progress:




If the chosen file is not a *valid* DEP/NMS configuration file, an error message appears saying that the configuration file is corrupted:




To avoid duplicate platforms in the merged configuration, checks will be made in the selected file, and duplicate platforms will be eliminated from the resulting configuration.

## 4.4. CLOSING A FILE

You can do so using the **Close** function from the **File** menu.
After closure of the current file, a new empty configuration will automatically appear.

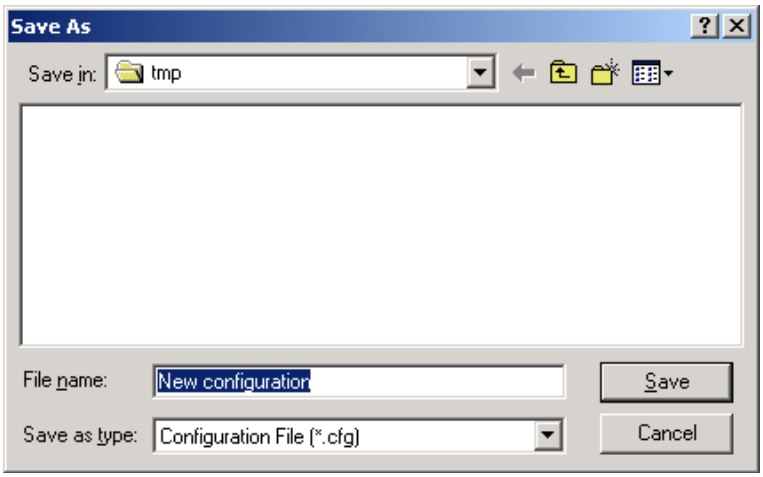
If you have modified the current configuration, you will be prompted to save the changes before the new configuration opens.

## 4.5. SAVING A CONFIGURATION

To save a configuration, you can use the function **Save** from the **File** menu, click the icon or use its equivalent keyboard shortcut `Ctrl+S,` or you can use the function **Save As** or its corresponding icon .

The function **Save** is to store the information about the current configuration in the current configuration file.
**Save As** is to be used for a new configuration for which no file name has been specified yet or to save an existing configuration in a file with a different name.

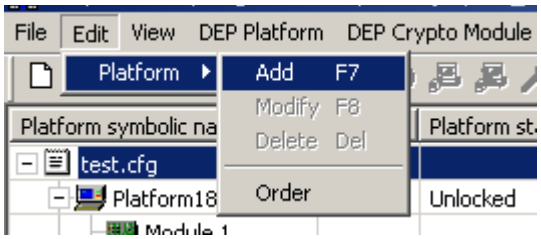
With the item **Save As** of the menu **File**, the user asks the DEP/NMS application to save the actual configuration in another file than the current configuration file or it is a new file.
The **Save As** dialog box prompts you for the name of the configuration file.




An SHA-1 hash is foreseen in order to have integrity of the data contained in the file.

# 5. PROVIDING PLATFORM INFORMATION

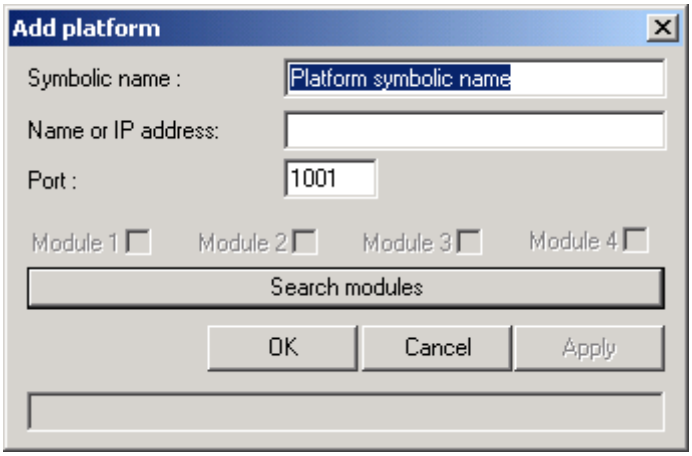
The basic elements in a DEP/NMS configuration are the DEP platforms to be managed. The functions to supply this information are in the **Edit** menu, under the item **Platform**.




The three functions are disabled for the limited version installed on a **DEP/XP** platform.

## 5.1. ADDING A PLATFORM

When you select the function **Add** or the icon or the equivalent function key **F7**, the **Add** platform dialog box appears. In this dialog box, you have to fill in the necessary information for DEP/NMS to identify the platform and communicate with it.




### 5.1.1. Identifying the platform

To identify a platform that you want to appear in the configuration in order to manage it via DEP/NMS, you have to provide the following bits of information:

- **Symbolic name**
  The **Symbolic name** is the name by which the DEP platform will be identified in the platform list of the DEP/NMS main window.
- **Name or IP Address**
  In the **Name or IP address** field, you can either specify the Host name or the IP-address of the DEP platform.
- **Port**

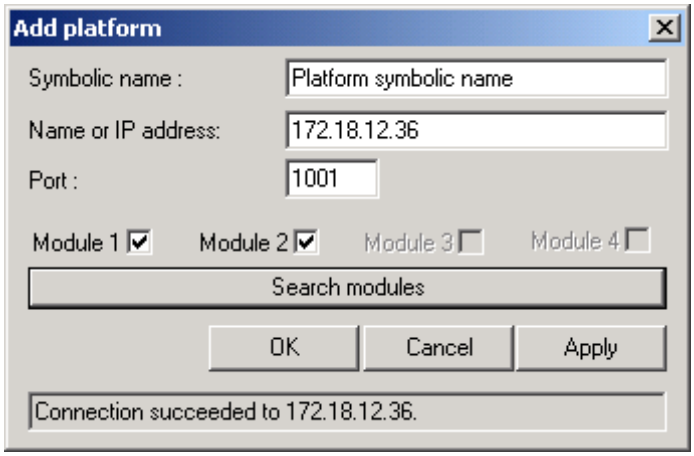
In this field, you have to supply the port that is to be used for the TCP/IP communication between the DEP Platform and the DEP/NMS application.
The default value is `1001`.

***Warning:***

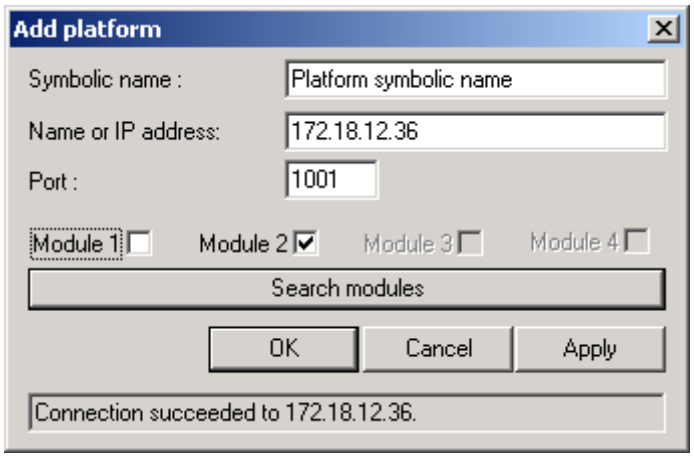
The **Port** value specified here must correspond to the value defined on the DEP Platform, otherwise the DEP/NMS cannot connect to it.

### 5.1.2. Selecting Crypto Modules

To automatically detect the DEP Crypto Modules presenting on selected DEP Platform click on the **Search modules** button. Clicking this button connects to the DEP Platform and selects the DEP Crypto Modules that have been detected.
The status field at the bottom provides feedback about the connection to the platform.




To determine the modules you want to appear in the configuration tree on the DEP/NMS main window, you have to select or deselect the modules accordingly.
The dialog box below illustrates a case where only the second DEP Crypto Module is selected to be included in the configuration.



### 5.1.3. Updating the configuration

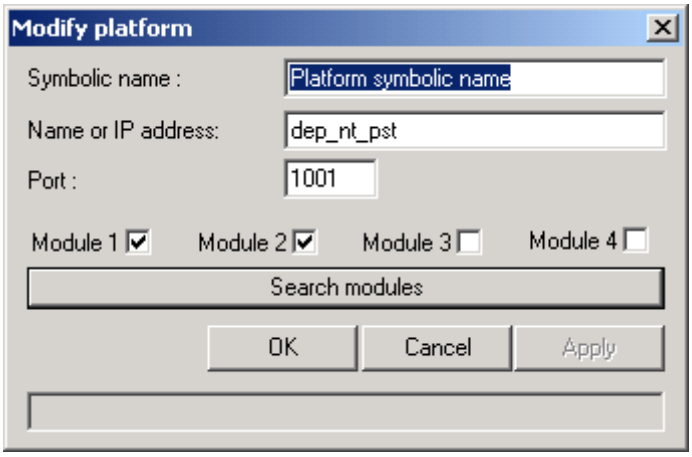
When you have made the proper selections, you can report them to the configuration tree on the main window using either of the two buttons:

- **OK**
  If search was performed before, this updates the configuration information in the main window and closes the dialog box. Otherwise detects all DEP Crypto Modules that are present on the platform, updates the configuration information in the main window and closes the dialog box.
- **Apply**
  This updates the configuration information in the main window without closing the dialog box. This allows to add several platforms in a row.

If you do not want to update the configuration with the changes you have made, click the **Cancel** button. In that case, the dialog box closes without performing any changes.

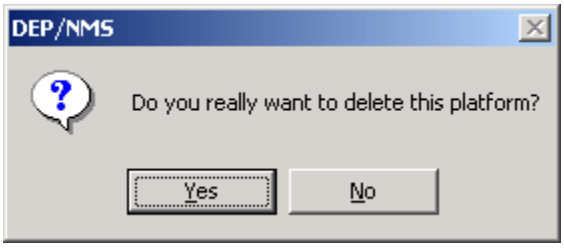
## 5.2. MODIFYING PLATFORM INFORMATION

To modify the DEP Platform information that is already in the configuration select **Modify** function in the **Platform** submenu in **Edit** menu. Also you can select the icon or the equivalent function key **F8**. The **Modify** platform dialog box appears.




## 5.3. DELETING A PLATFORM FROM THE CONFIGURATION

To remove a DEP Platform from the current configuration, select the **Delete** function from the **Platform** submenu in the **Edit** menu or use the equivalent **Delete** key from the keyboard.
A dialog box appears prompting you to confirm your operation.

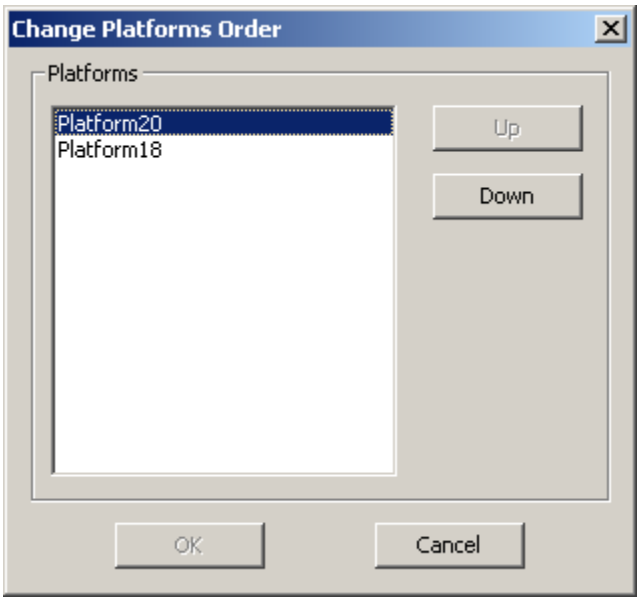



If you press **Yes**, the platform and all Crypto Modules linked to it will be removed from the configuration tree and the main window will automatically refreshed.

If you press **No**, the dialog box will be closed without any changes.

## 5.4. PLATFORMS ORDER

To change the order of platforms in grid, select the **Order** function in the **Platform** submenu in **Edit** menu.
A dialog box appears allowing you to perform this operation.




All the DEP Platforms of configuration are listed in the *Platforms* list. To change the DEP Platforms position in the list select any of them and click **Up** or **Down** buttons to up and down its position.

To confirm the new order of DEP Platforms click **OK**, otherwise simply click **Cancel**.

# 6. THE VIEW MENU

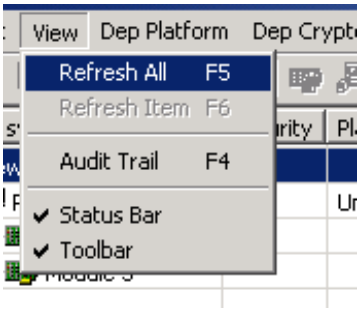
The **View** menu contains functions that allow to determine the information being present in the main window.
The View menu contains the following functions:

- **Refresh All** and **Refresh Item** to refresh the contents of the main window, globally or for a specific item;
- **Audit Trail** to open Audit Trail window;
- **Status Bar** to display/hide the status bar;
- **Toolbar** to display/hide the toolbar or view the audit trail.

## 6.1. REFRESHING THE INFORMATION

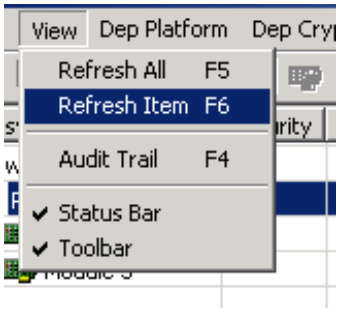
### 6.1.1. Refreshing window globally

With the function **Refresh All** from the **View** menu or with the corresponding function key **F5**, you can refresh in one go the information about all the DEP Platforms and their respective DEP Crypto Modules listed in the DEP/NMS main window.



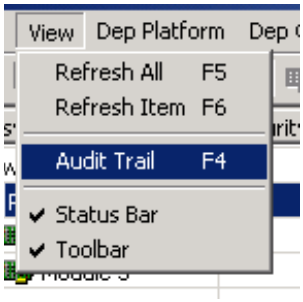

### 6.1.2. Refreshing Item

With the function **Refresh Item** from the **View** menu or with the corresponding function key **F6**, you can refresh the information about the selected DEP Platform or DEP Crypto Module.



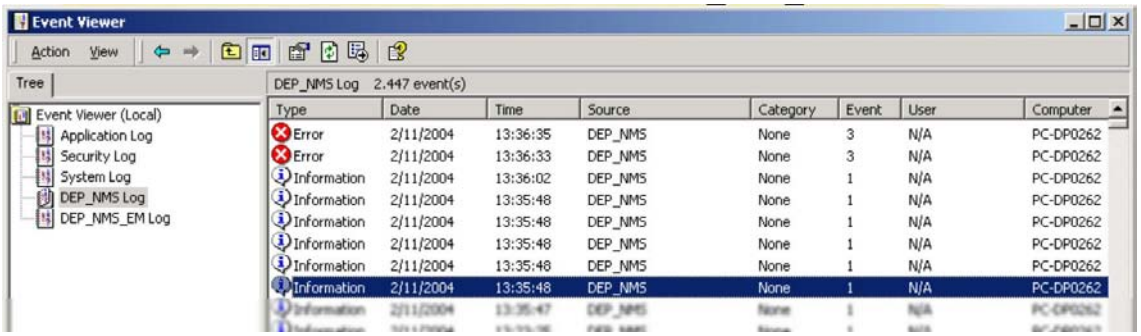

## 6.2. VIEWING THE AUDIT TRAIL

With the function **Audit Trail** from the **View** menu or the corresponding function key **F4**, you can view the audit trail.




The function opens Windows **Event Viewer** window**.** In addition to the standard Windows events, the window presents the logging of:

- actions on the DEP/NMS itself (`DEP_NMS Log`),
- any kind of warnings, errors, alarms,...that occurred (`DEP_NMS_EM Log`).

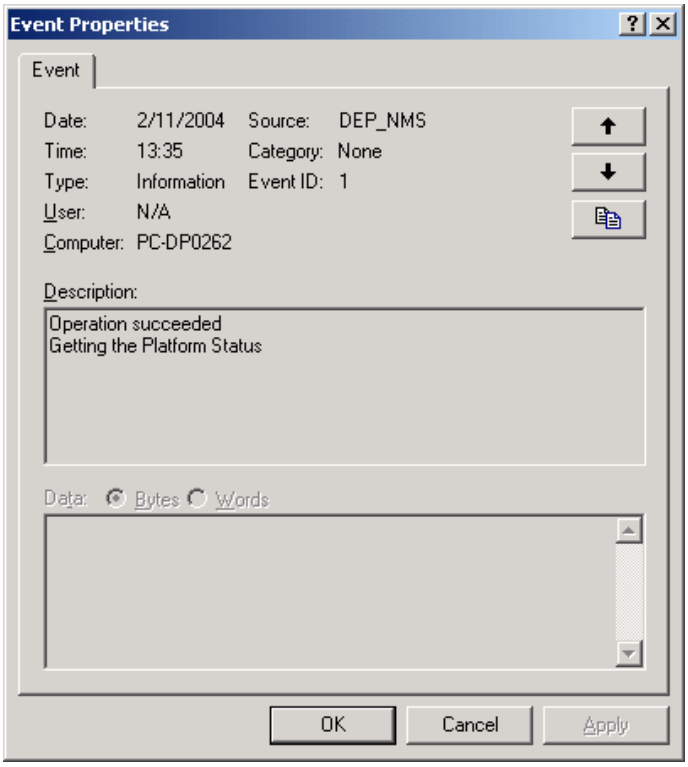

Event Viewer
Action View
Tree
Event Viewer (Local)
Application Log
Security Log
System Log
DEP_NMS Log
DEP_NMS_EM Log
DEP_NMS Log 2.447 event(s)
Type Date Time Source Category Event User Computer
Error 2/11/2004 13:36:35 DEP_NMS None 3 N/A PC-DP0262
Error 2/11/2004 13:36:33 DEP_NMS None 3 N/A PC-DP0262
Information 2/11/2004 13:36:02 DEP_NMS None 1 N/A PC-DP0262
Information 2/11/2004 13:35:48 DEP_NMS None 1 N/A PC-DP0262
Information 2/11/2004 13:35:48 DEP_NMS None 1 N/A PC-DP0262
Information 2/11/2004 13:35:48 DEP_NMS None 1 N/A PC-DP0262
Information 2/11/2004 13:35:48 DEP_NMS None 1 N/A PC-DP0262
Information 2/11/2004 13:35:48 DEP_NMS None 1 N/A PC-DP0262

In the **Event Viewer (Local)** tree, there are two entries related to DEP/NMS:

- **DEP_NMS Log,** which refers to the events that remain on the PC where the DEP/NMS application is running;
- **DEP_NMS_EM Log**, which refers to the events that are to be transmitted via TCP/IP to the PC where the DEP/EM application is running.

For every event, the following bits of information are recorded in the event log file of the PC where the DEP/NMS application is running:

- date and time of the event or the operation;
- source of the event or the operation (DEP/NMS);
- type of the event: *information - warning – error*;
- description: short explanation of the event or the operation (for example. settings configuration of the DEP Platform, unlocking of DEP Platform or DEP Crypto Module,…).

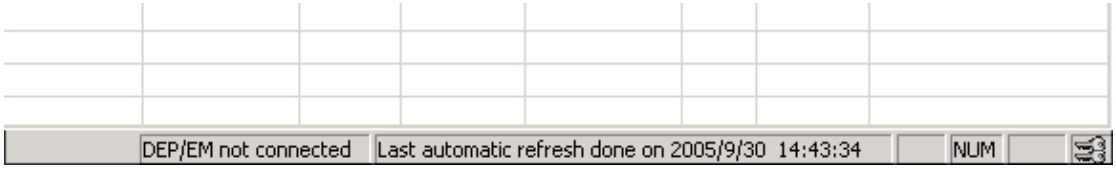



For a detailed list of operations that are logged, refer to the **ANNEX c: audit trail Operations and events**:

With the function **Save Log File As** from the **Action** menu of the Windows **Event Viewer**, you can store the data of the event log file into an ASCII file.

## 6.3. SHOWING/HIDING THE STATUS BAR

To show or hide the status bar at the bottom of the main menu respectively select/deselect the **Status Bar** option in **View** menu.

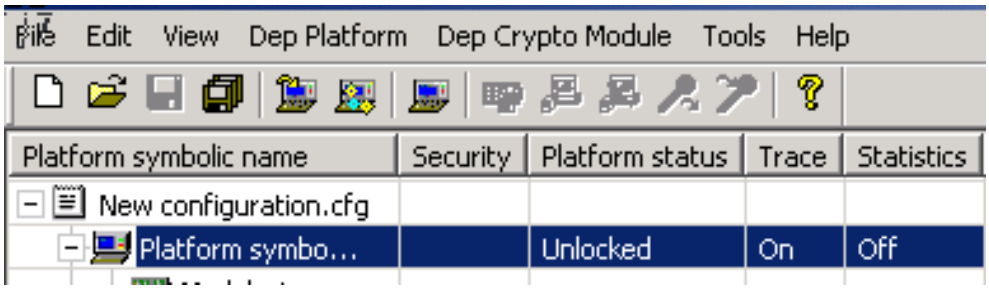



From left to right, the status bar contains the following bits of information:

- Status of the connection of the DEP/NMS to its DEP/EM ( for more information about DEP/EM refer to the DEP/EM User Manual);
- The date/time of the last refresh all (manual or automatic);
- *Caps Lock* activated;
- *Num Lock* activated;
- *Scroll Lock* activated;
- Status of security level of the DEP/NMS (see the specific chapter 10.2 for more information).

## 6.4. SHOWING/HIDING THE TOOLBAR

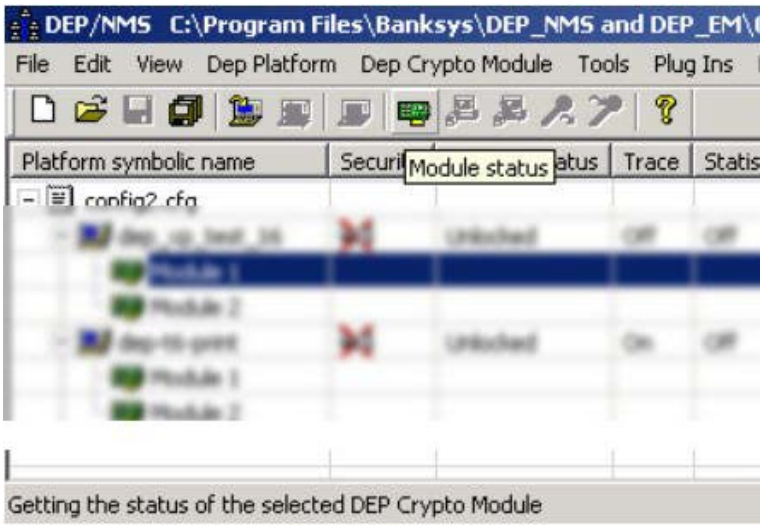
To show or hide the toolbar underneath the menu bar in main window respectively select/deselect the **Toolbar** option in **View** menu.




The table below gives an overview of the icons and their meaning:

| Icon | Meaning |
|---|---|
| | Create a new configuration |
| | Open an existing configuration |
| | Save configuration |
| | Save as configuration |
| | Add DEP platform |
| | Modify DEP Platform |
| | DEP Platform status |
| | DEP Crypto Module status |
| | Load application |
| | End application |
| | Backup keys |
| | Restore keys |
| | Open the help file for the DEP/NMS application |

Upon hovering an icon, a tooltip displays the name of the function that is behind it. At the same time, some additional information is provided at the left side of the status bar.


DEP/NMS C:\Program Files\Banksys\DEP_NMS and DEP_EM\
File Edit View Dep Platform Dep Crypto Module Tools Plug Ins
Platform symbolic name
Module status
Trace
config2.cfg
Getting the status of the selected DEP Crypto Module

# 7. MANAGING DEP PLATFORMS

To obtain information about a DEP Platform or carry out an operation, you need to select the DEP Platform from the configuration tree in the main window. To select the DEP Platform click on the line with appropriate DEP Platform.

The functions that you can apply to a platform can be accessed in any of the following ways:

- via the DEP platform menu
- via the context menu that opens when you right-click the platform
- via an icon on the toolbar
- via a shortcut key (refer to **ANNEX B: Function keys and shortcuts** on page 138).

In the table presented on the DEP/NMS main window, the information related to the DEP platforms is in the columns entitled:

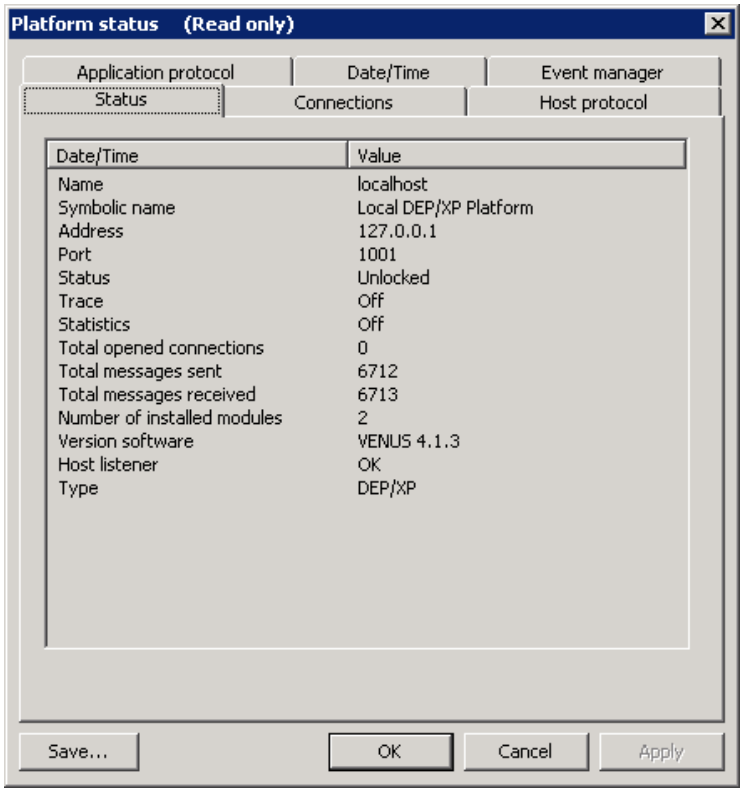
- **Security**
- **Platform status**
- **Trace**
- **Statistics**
- **TCP/IP address or name**

## 7.1. HANDLING PLATFORM STATUS INFORMATION

### 7.1.1. Requesting status information

To open the DEP Platform's status information dialog-box select the appropriate DEP Platform and choose **Status** item from **DEP Platform** menu or press the **F2** function key.

The Platform **Status** window appears, comprising multiple tab sheets, each providing information and/or parameters related to a specific aspect.




## 7.1.2. Interpreting the platform status information

### 7.1.2.1. Status tab sheet

The **Status** tab sheet contains the following items:

| Item | Meaning |
|---|---|
| *Name* | The TCP/IP name used by the DEP platform on the LAN |
| *Symbolic Name* | The name used to represent the DEP platform |
| *Address* | The TCP/IP address of the DEP platform on the LAN |
| *Port* | The TCP/IP port of the DEP platform on the LAN for the messages with the DEP/NMS |
| *Status* | – *locked*: platform is locked by another user<br>– *unlocked* |
| *Trace* | – *On*: trace facility on the platform is active<br>– *Off*: trace facility on the platform is not active |
| *Statistics* | – *On*: statistics facility on the platform is active<br>– *Off:* statistics facility on the platform is not active |
| *Total Opened connections* | The number of opened connections |
| *Total Messages sent* | The total number of messages sent by the DEP platform |
| *Total Messages received* | gives the total number of messages received by the DEP platform |
| *Number of installed modules* | The number of the *installed* DEP Crypto Modules in |

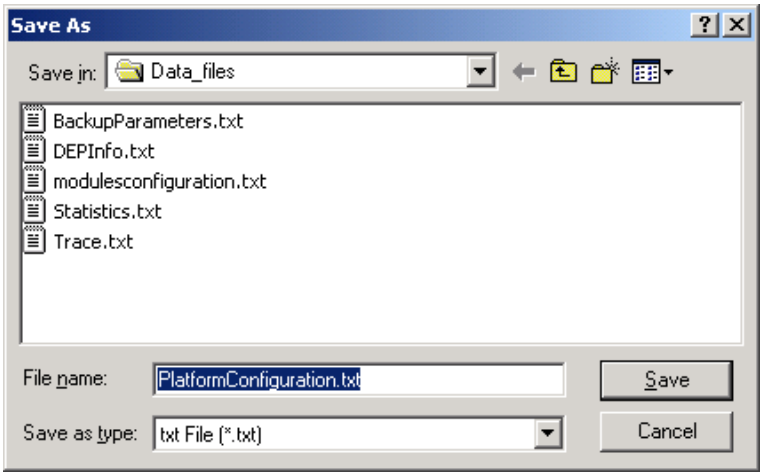
| | |
|---|---|
| | the DEP platform; it may differ from the number of *managed* DEP Crypto Modules |
| *Version software* | The version of software that lies on the DEP platform |
| *Host listener* | Indicates whether the DEP platform is ready for listening to the hosts |
| *Type* | The type of DEP platform (**DEP/T6**, **DEP/XP**) |

### 7.1.3. Saving status information

You can save the status information into a text file. Click the **Save...** button on **Platform Status** window and supply the name of the destination file in the **Save As** dialog box.

The filename presented by default is:

- *PlatformConfiguration.txt* if status data is saved for the first time;
- the name of the status file that was last used if status data has already been saved.




If the file already exists, DEP/NMS requests confirmation to overwrite it.

By default, the status files are saved in the `Data_files` subfolder with path `"C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows 2000 and Windows XP, and `"C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows Vista and Windows 7 respectively.

### 7.1.4. Modifying parameters

In addition to presenting the status information, the "**Platform status**" window also lets you change certain parameters.

Depending on the button that you press, the application behaves in a different way:

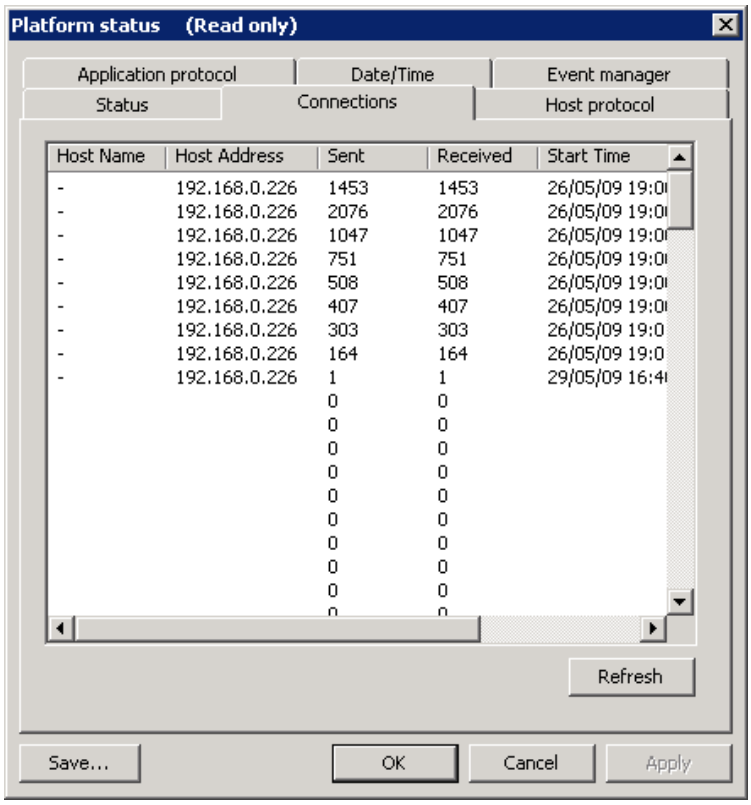
- **OK**: all data are updated for the selected DEP platform and the dialog box closes;
- **Apply**: all data are updated for the selected platform but the dialog box does not close;
- **Cancel**: data are not modified and the dialog box closes.

***Remark:***

When the platform is *unlocked* it is not possible to change parameters and "Read only" is displayed in the title bar of the window.

#### 7.1.4.1. Connections

This tab sheet contains information about the connections between the hosts and the DEP Platform.
The **Connections** tab sheet presents the list of open and closed connections. To easily notice the open connections in the list, these are displayed in blue.




For each connection, the following information is presented:

| Item | Meaning |
|---|---|
| **Host name** | – *Hostname*: name found by a DNS service<br>– "-": if no name has been found or disabled in the configure communication protocol data |
| **Host address** | IP-address of the host connected. "-": if Resolving hostname is enabled in the configuration of communication protocol data and hostname was found by a DNS service |
| **Sent** | Total number of messages sent via the connection (from open until close) |
| **Received** | Total number of messages received via the connection (from open until close) |
| **Start time** | Start date/time of connection |

| | |
|---|---|
| **End time** | End date/time of connection; this information is only present for old connections (open connections have the "-" symbol printed) |

***Remarks:***

1. The connections shown are only those for the host, not the one (or those) opened by DEP/NMS.

2. If the platform works in PDP, this will lead to an empty list.

With the **Refresh** button or with the corresponding function key **F5,** you can perform a manual refresh of the contents of the lists.

#### 7.1.4.2. Host Protocol

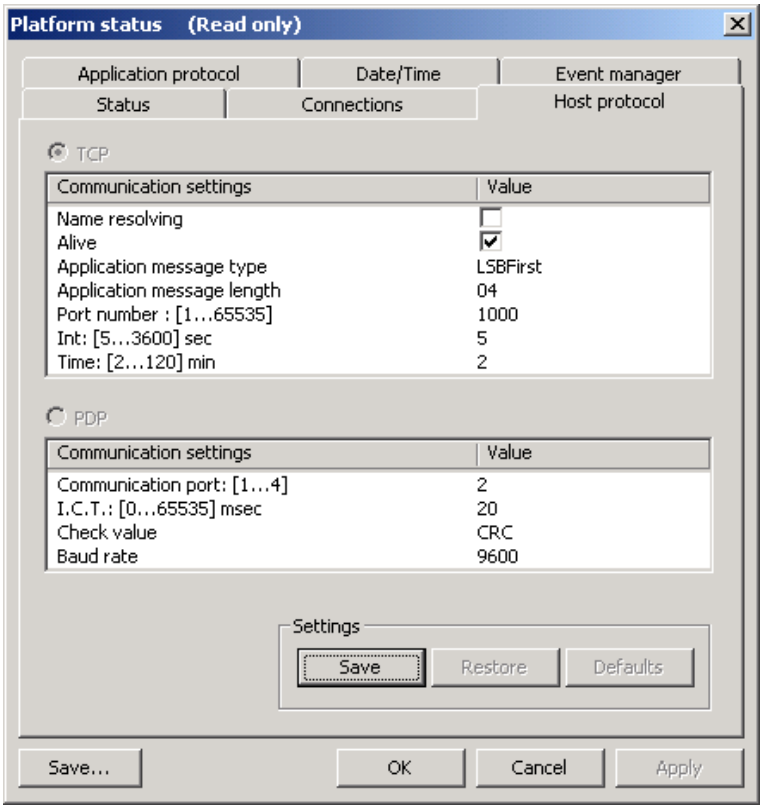
On the **Host protocol** tab sheet, you can define the host protocol and set its parameters used for communication between the hosts and the DEP Platform.

***Warning:***

The DEP Platform *must be locked* for this operation.

Two different protocols are available:
- PDP
- TCP/IP

Refer to the section below for detailed information about both protocols.



For each of the two protocols you can define various parameters. DEP/NMS stores this information for each DEP Platform.

With regard to the settings, different operations are possible, Depending on the button that you press:

- **Save:** Stores the information of the user into the configuration file, in order to quickly configure other platforms;
- **Restore:** To retrieve the information saved during the save operation;
- **Defaults**: Sets the fields to the default factory values coming from the **DEP** platform.

#### 7.1.4.3. Setting PDP parameters

PDP is an asynchronous protocol that is used to communicate with the DEP Platform through a serial communication port of the PC.

The following parameters could be set:

| Parameter | Meaning | Default value |
|---|---|---|
| **COM port** | Defines the serial communication port of the DEP Platform that is used for its communication | 1<br>***Note:*** For the DEP/T6, this field is read-only and fixed at a value of 2 |
| **I.C.T** | The inter-character time-out parameter in milliseconds that defines the maximum delay between two characters of the message | 20 milliseconds |
| **Check value** | Defines the check value that is used in the PDP protocol: CRC or LRC | CRC |
| **Baud rate** | Defines the communication speed used for the DEP platform communication; it ranges from 4800 to 115200 baud | 9600 |

#### 7.1.4.4. TCP/IP

The standard TCP/IP protocol could also be used for establishing communication with the DEP Platform.

Multiple TCP/IP sessions, up to a **maximum of 16**, could be established in parallel between the DEP Platform and a host, called multi-connect DEP Platform.

The parameters for the TCP/IP protocol are:

| Parameter | Meaning | Default value |
|---|---|---|
| **Name resolving** | Flag that indicates whether or not the DEP Platform should use a DNS | Disabled |

| | | |
|---|---|---|
| | (Dynamic Name Solving) service to lookup the hostname | |
| **Alive** | Flag that indicates whether the DEP Platform should use keep-alive messages to check if the host is still alive | Deactivated |
| **Application message type** | Determines where the Most Significant Byte (MSB) and the Least Significant Byte (LSB) convention is used, it is limited to the values `LSBFirst` and `MSBFirst` | --- |
| **Application message length** | Gives the length in bytes of the message sent through TCP/IP; it is limited to the values **2** and **4** | --- |
| **Port number** | should be defined to gain access to the DEP Platform<br>***Warnings:***<br>1. Do not use *1001* or *1002*, since these are used as the default values for the communication between respectively DEP Platform and DEP/NMS and DEP Platform to DEP/EM for the transfer of commands or the handling of errors or warnings<br>2. For the **DEP/T6**, this field is read-only and fixed at a value of 2 | 1000 |
| **Int (sec)** | Defines the interval (in seconds) used for sending periodical alive messages | 5 seconds |
| **Time (min)** | Specifies the time-interval (in minutes) of inactivity before alive messages are exchanged | 2 minutes |

When the **alive** flag is disabled, the DEP Platform does not verify whether the host is still connected.

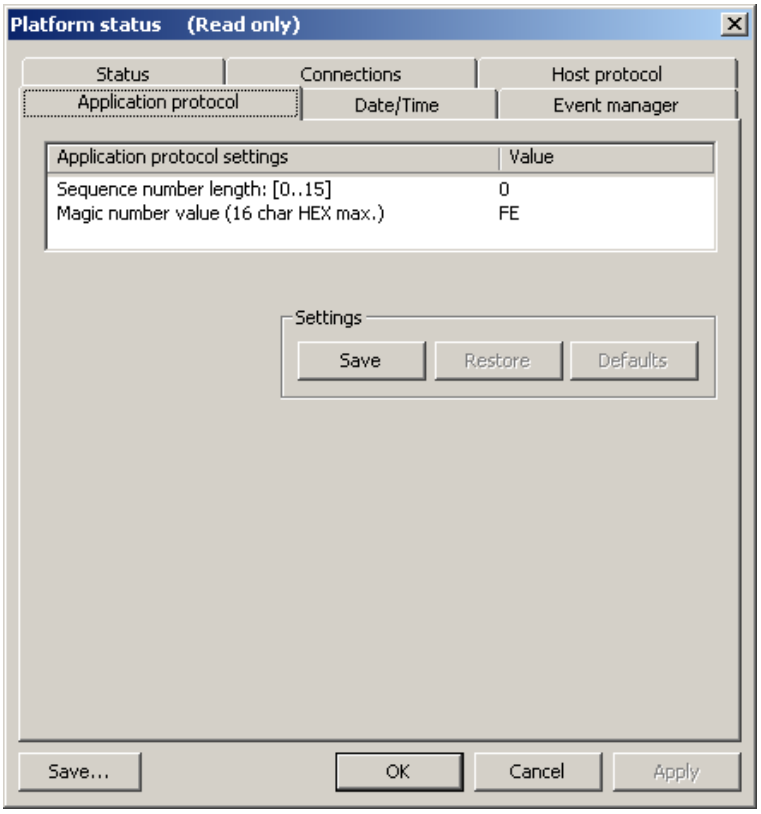
In case the **alive** flag is enabled and there is no communication within a time interval of <**Time**> minutes, the DEP Platform sends every <**Int**> seconds an **alive** message to check the availability of the host. When the host does not respond the **alive** message after three retries, the DEP Platform breaks off the TCP/IP connection so that the host could possibly reconnect to the DEP Platform (no lost of connections).

#### 7.1.4.5. Application Protocol

On this tab sheet you can set the parameters for the application protocol.

***Warning:***

The DEP Platform *must be locked* for this operation.




The following parameters can be set:

| Parameter | Meaning | Default value |
|---|---|---|
| **Sequence Number Length** | Indicates the number of bytes (decimal representation) occupied by the host sequence number; value ranges from 0 to 16<br><br>***Note:***<br>This feature is not available if *enhanced protocol* is used | 0 |
| **Magic Number Value** | Identifies a host command as using a dedicated DEP Platform protocol and occupies the first byte(s) of a host command | FE |

**DEP/NMS** stores this information for each DEP Platform in the configuration file.

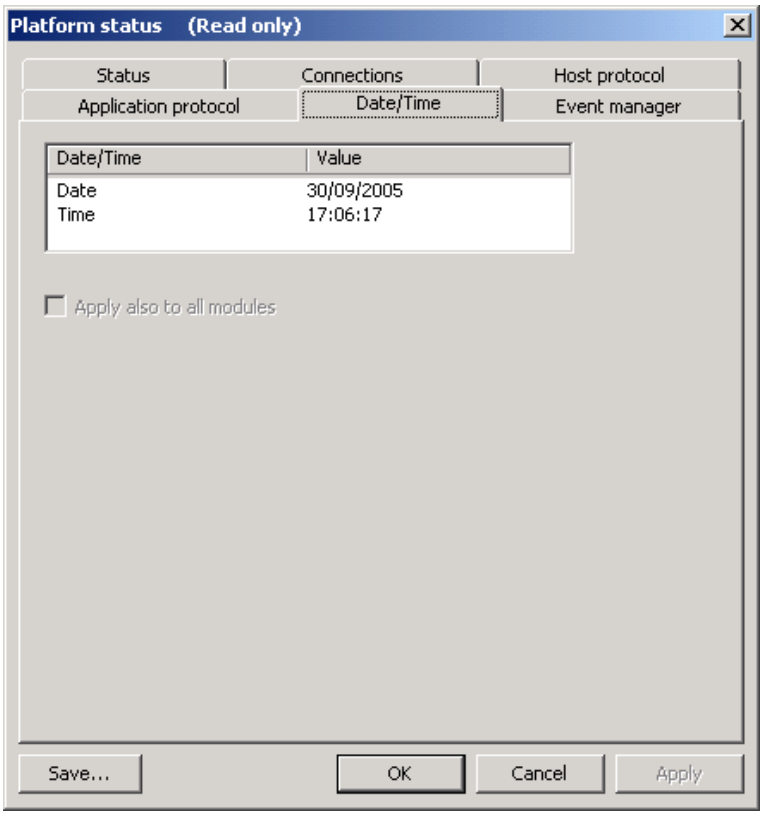
With regard to the settings, different operations are possible, depending on the button that you press:

- **Save:** Stores the information of the user into the configuration file, in order to quickly configure other platforms
- **Restore:** To retrieve the information saved during the save operation
- **Defaults**: Sets the fields to the default factory values coming from the DEP Platform

For more detailed information on the **Application Protocol**, refer to the *DEP Host Interface Protocol* document.

#### 7.1.4.6. Platform Date/Time

The Date/Time tab sheet shows the Date/Time defined on the DEP Platform:

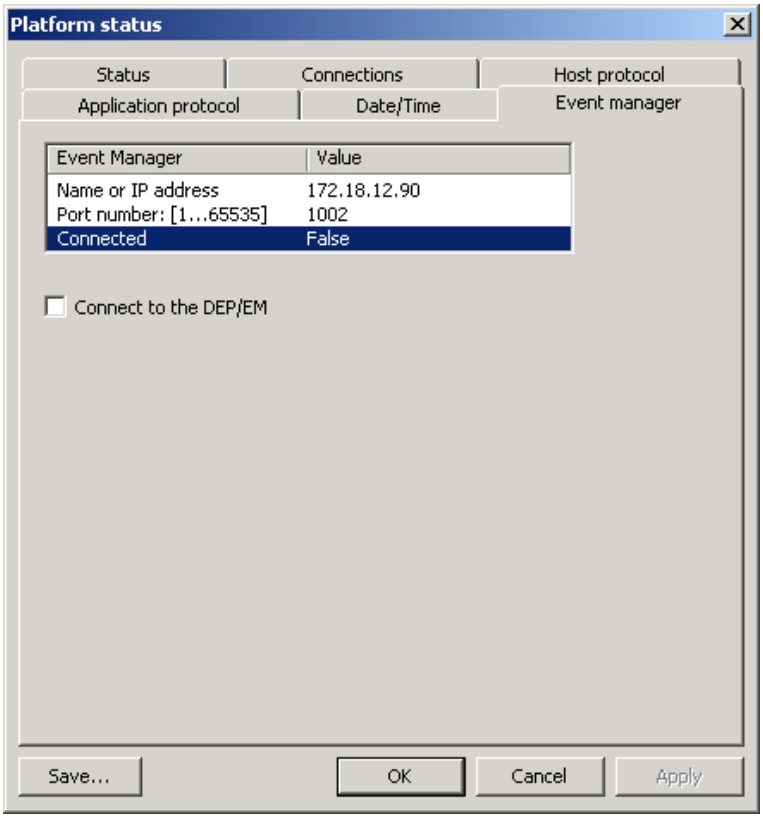



Here, you can change the date and /or the time of the DEP Platform.

It is also possible to adjust at the same time the Real Time Clock of the *managed* DEP Crypto Modules of the selected DEP Platform. However, for doing so, you must make sure that the DEP Crypto Modules have the capability `CAP_STD_SET_RTC` activated.

#### 7.1.4.7. Event Manager

Event Manager tab sheet shows information concerning the event manager that is connected to the DEP Platform.




The DEP Platform uses this information to send events (information, warning, errors) to the DEP/EM application that will listen to the specified IP-address and port.
If the fields are not filled in or no application is listening, the events are kept locally.

The list of information is the following:

| Parameter | Meaning |
|---|---|
| **Event Manager name or IP address** | Gives the address or name of the **DEP/EM** for the selected DEP Platform |
| **Event Manager port** | Gives the port of the **DEP/EM** for the concerned DEP Platform |
| **Connected** | Indicates if the Event Manager is effectively connected to the DEP Platform |

To force the DEP Platform to connect to the Event Manager in case it is locked, select the option **Connect to the DEP/EM** and click **OK** or **Apply**.

***Warning:***

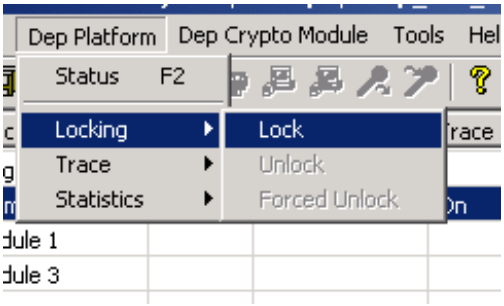
Do not use *"localhost"* as the value for the *Name* of the Event Manager, because the information is sent to the platform and will be used **locally** as address for its own Event Manager address.

## 7.2. HANDLING PLATFORM LOCKING

Multiple DEP/NMS application instances can have the same DEP Platforms in their configuration. A user can decide to lock the platform, thus reserving it all to himself.

The **Locking** menu presents functions to control the locks on a platform. The submenu offers the following functions:

- **Lock**
- **Unlock**
- **Forced Unlock**




If one of the functions has been executed, the status of the **DEP** platform in the main window is automatically updated.

### 7.2.1. Lock

The **Lock** function lets you reserve the DEP Platform exclusively to yourself. This prevents other hosts or DEP/NMS instances from accessing it and performing specific operations on it.

When a DEP Platform is locked, all its DEP Crypto Modules are also locked.
The status of the DEP Platform in the main window is now `Locked`.

### 7.2.2. Unlock

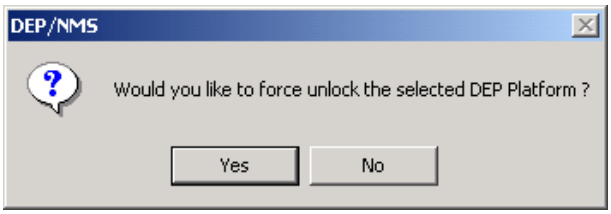
The function **Unlock** lets you free the DEP Platform in order to allow hosts or other DEP/NMS instances to access it again.

When a DEP Platform is unlocked, all its DEP Crypto Modules are also unlocked. The status of the **DEP** platform in the main window is now `Unlocked`.

Unlocking a DEP Platform implies unlocking of all its DEP Crypto Modules.

### 7.2.3. Forced Unlock

With the **Forced Unlock** function, you can unlock a DEP Platform that has been locked by another DEP/NMS instance. The DEP Platform is locked by another user. Before the platform is unlocked, you are prompted for confirmation.



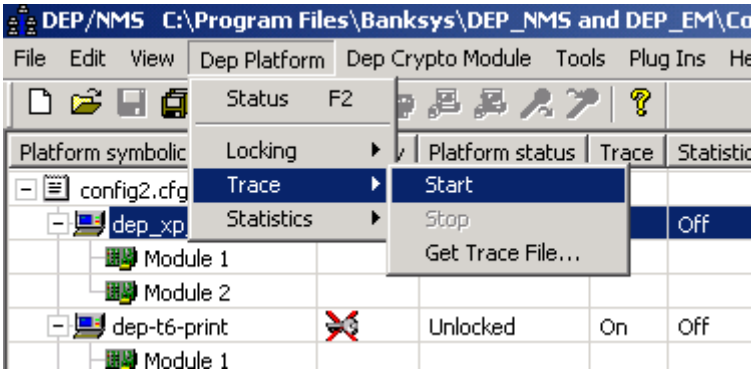
When a DEP Platform is forced unlocked, all its DEP Crypto Modules are also forced unlocked.
The status of the DEP Platform in the main window is now `Unlocked`.

After that, you can lock the DEP Platform.

## 7.3. HANDLING TRACES

A DEP Platform can trace the messages that are exchanged between the DEP Platform and the hosts.
The **Trace** menu offers functions to manage the tracing feature. The following functions appear in the submenu:

- **Start**
- **Stop**
- **Get Trace File**




By default, the trace functionality is *disabled*.

At the start, the trace file is stored on the DEP Platform, but it can be copied subsequently to the DEP/NMS.

### 7.3.1. Activating the logging

Use the function **Start** from the **Trace** submenu to start the trace utility and log the messages exchanged between DEP Platform and host.
The status of the trace utility of the selected DEP Platform on the DEP/NMS switches to *On*.

> ***Note:***
>
> The trace of messages depends on the activation of the capability `CAP_STD_TRACE` in the DEP Crypto Module(s) of the DEP Platform.

### 7.3.2. Stopping the logging

Use the **Stop** function to stop the trace utility. The status of the trace utility of the selected DEP Platform on the DEP/NMS is switched to *Off*.

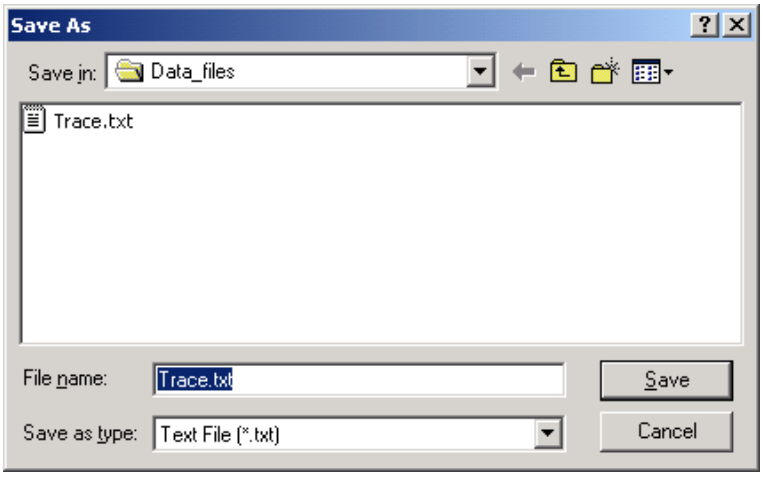
### 7.3.3. Getting the trace file

Select the **Get Trace File** function from the **Trace** submenu if you want to obtain a local copy of the trace file that has been stored on the DEP Platform.
Before you can get a trace, you must *stop* the tracing.

When you select the function, a **Save As** dialog box appears, in which you specify the path and name of the logging file on the DEP/NMS.
The filename presented by default is:

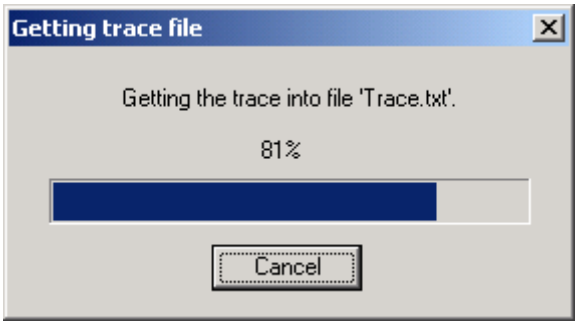
- Trace.txt if trace data is saved for the first time
- the name of the trace file that was last used if trace data has been saved before

If the file already exists, DEP/NMS requests confirmation to overwrite it.




By default, the status files are saved in the `Data_files` subfolder with path `"C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows 2000 and Windows XP, and `"C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows Vista and Windows 7 respectively.

When you have specified the name and location of the file, DEP/NMS starts copying the trace file from the DEP Platform.
The **Getting trace file** dialog box informs you about the progress of the operation.




A normal trace file (after stopping the trace facility) has the following layout:

```
000000690 001048576
TRACE CREATED
```

```
22/03/2007 13:33:43.348 status=snd_host log=01 hst_msg_vers=0x30 serv_addr=0x01
int_msg_nr=0x00
arrival=0768374874 DEParture=0768374924 delta=0000000050
HST_CMD len=000017fe30010000ff010001000051122334455
HST_RSP len=000006fe3001010000

22/03/2007 13:34:41.272 status=snd_host log=01 hst_msg_vers=0x30 serv_addr=0x01
int_msg_nr=0x01
arrival=0768432837 DEParture=0768432848 delta=0000000011
HST_CMD
len=000084fe30010000ff012504000000000301250200e8b012508000018810004398927638200020
6658400038f47f4830003a7f34c012509000101250300080225020002250500022503000125a000125
000001250b00
HST_RSP len=000015fe30010100f00225020003003c0001

TRACE DISABLED
```

The first line of every trace file contains the current trace position (**000005365**) and the maximal length (**000008192**) of the trace file. Both values are presented in bytes. They are kept and used for internal management of the trace file, especially for the cyclic property of the file.

When the trace facility wasn't stopped until after capture, a trace file has the following layout:

```
TRACE CREATED
22/03/2007 13:33:43.348 status=snd_host log=01 hst_msg_vers=0x30 serv_addr=0x01
int_msg_nr=0x00
arrival=0768374874 DEParture=0768374924 delta=0000000050
HST_CMD len=000017fe30010000ff010001000051122334455
HST_RSP len=000006fe3001010000

22/03/2007 13:34:41.272 status=snd_host log=01 hst_msg_vers=0x30 serv_addr=0x01
int_msg_nr=0x01
arrival=0768432837 DEParture=0768432848 delta=0000000011
HST_CMD
len=000084fe30010000ff012504000000000301250200e8b012508000018810004398927638200020
6658400038f47f4830003a7f34c012509000101250300080225020002250500022503000125a000125
000001250b00
HST_RSP len=000015fe30010100f00225020003003c0001
```

The statements **TRACE CREATED** and **TRACE DISABLED** refer to the moments when the trace facility was started and stopped respectively.

Every record contains the information about a specific message exchanged between the host and DEP Platform.

- the date (`22/02/2000`) and time (`14:12:19.988`) express the registration date of the trace record
- `status=snd_host` indicates that the message comes from the host
- `log=01` indicates that the logging is allowed because of presence of the `CAP_STD_TRACE` capability (`00` means that tracing is not allowed)
- `hst_msg_vers=0x20` defines the version number of the internal messages composition (only used for internal management)
- `serv_addr=0x01` indicates the server address (only used for internal management)
- `int_msg_nr=0x08` is an internal message numbering of the treated messages and can vary between `0x00` and `0x0F` (only used for internal management)
- `arrival=0002425978` gives the time (in ticks) the host handler received the command message

- `departure=0002425998` gives the time (in ticks) the host handler received the response message
- `delta=0000000020` indicates the processing time (in ticks) and is the difference between the `DEParture` and the `arrival`
- the `HST_CMD` part is the logging of the received command message
  - `len=000680` (decimal) defines the length of the received command message in bytes
  - `ff 01 13 03 00 … 01 13 04 00` is the hexadecimal representation of the trace of the received command message (only available when the `log` equals `01`)
- the `HST_RSP` part is the logging of the returned response message
  - `len=000009` (decimal) defines the length of the replied message in bytes
  - `00 01 13 04 00 b1 a1 21 bd` is the hexadecimal representation of the trace of the response message (only available when the `log` equals `01`)

As mentioned before, the trace file is a cyclic file. When the maximum length of the file has been reached, the logging continues at the beginning of the file, thus overwriting the oldest data in the file.

Below is a sample of a trace file that has started cycling. When the trace facility has been stopped before consulting the trace file, the last record could easily be found by searching for the words `TRACE DISABLED`.

```
22/03/2007 13:59:59.625 status=snd_host log=01 hst_msg_vers=0x30 serv_addr=0x01
int_msg_nr=0x35
arrival=0769951171 DEParture=0769951201 delta=0000000030
HST_CMD
len=001035fe3001000f07000000000000000000000032dfff0100010003e8b24afcd6d5fd3613972
d03e4b8e41bf54ed12de4af4c0bb102bfba26fd5a61f4b7731ab265bd16ceb3b379c80005080877c774
cdd2cbd54142f9ae9d9575b95ced099be64c02bf203cd6231becf902280a316d92226c235dcd7a432f4
d61c6aef00e58ba60f6a2d5169a34088c9de0fe54f6877d190cf86128b67e8bb7bd4025de1981addc0a
c2d9a83634de5520ee3af63e908f729ce7fe4cd93ace2959d722e8e599af0fb0256e7d47ef4d2e085ef
ec356cf2b3f739ce666d0031fcc3e9c6b767224a6ab01260b448c333db40de272d5e05a2795090241e8
3c7b1520c5b6d862014f1a89185558122a75b8650a844f87cfc05f3d2c6b8b7795786c348ede769b0b0
86ac24485535d582c2c96425e258a1ef102b3ce3b25fdf40425f06ab3d4413ae276d538ec4f71b3f32b
0f38b2269238e19438432d00a7879b74bd50579afd9c926346dda7a13d0afbbc8c95649ad7b009ace11
62c47d69fc1f119daf09e6876f57b1a4e7423c54258d87c442aeab77ab55448f48b4340e47a48e65828
fd803e383b5eea36b25fe29fee23883305a1afe7ac380fae85ce6fcf8a29baad39999fdd856f64e4906
8468e9159c4fddfaa8c9228937b3ee1ad3d00eb4d0991f718997c5de1a5e943ee6f04c5fac01dbed9c2
207ebec3498e3fc1ece2c0bf1b1eb78d001ccbc8d575b5217487477a6b2c6c360d8b21c40fc839d23a5
d7339c4cb76c3b651262b7b2344e23753a20122e91301299c8970e63f7438232c7c6a7a708636f1dc64
74f280073027bdc3fbb417b2707915082b97a62e220692057a01b17da579b22598a410ddeb249ab7efa
5fd6134669fc24f1e36c9027338cb92ed87f773273d41b4018da9e582248dda0b066d326d325fab9e49
f98d60ba9260891ef2173aeaf3270dd6e3a9b9aaca0dd42076635e007d5eab7098afd7197ec8a3b7cf3
c15b99a95bd4df6a093cf14dc903e61444d8b3d80de8fd37445b8bac06d18c5e16f92b8f57e36c2acf2
67781fe2a73655736bc4c9349c2b7f3de1e3a2fe28cf6921eb4552ce8b49cf37be0693a4e5619d8e8aa
9e6ff053746a39efb2dff05cb2a7c247a1c910bd344ccf242a900c872033c29abda8468efe291a1d8e3
1e3ffce1c04d98f7ed06fcc47be5e3b567525f06a4b9dadabb9a6163756df42b5e3ac69bd53b41da1ef
463f1355dd5706dda1f451ee35b8f52b21d49d05cdd2f1411069c86678cc0c38d4bfd3c7559e50ada0e
9616a1c696c91bba3aa938448edcee9a3b0140543acfcfdc03188ac2265b12de017c24da12574611120
8f3601a5214c353d9b527c929eca0cc865fe7b7bfa3521546dd8538d4277f1d4cf08ada995718e384dc
98674c5a78e9839ba551ebc59231dd653e913dd436ad05982048e780332d1cdf9f3eb7e202000900010
00200
HST_RSP
len=001027fe3001010f07000000000000000000000032df000100020003e8b24afcd6d5fd3613972
d03e4b8e41bf54ed12de4af4c0bb102bfba26fd5a61f4b7731ab265bd16ceb3b379c80005080877c774
cdd2cbd54142f9ae9d9575b95ced099be64c02bf203cd6231becf902280a316d92226c235dcd7a432f4
d61c6aef00e58ba60f6a2d5169a34088c9de0fe54f6877d190cf86128b67e8bb7bd4025de1981addc0a
c2d9a83634de5520ee3af63e908f729ce7fe4cd93ace2959d722e8e599af0fb0256e7d47ef4d2e085ef
```

```
ec356cf2b3f739ce666d0031fcc3e9c6b767224a6ab01260b448c333db40de272d5e05a2795090241e8
3c7b1520c5b6d862014f1a89185558122a75b8650a844f87cfc05f3d2c6b8b7795786c348ede769b0b0
86ac24485535d582c2c96425e258a1ef102b3ce3b25fdf40425f06ab3d4413ae276d538ec4f71b3f32b
0f38b2269238e19438432d00a7879b74bd50579afd9c926346dda7a13d0afbbc8c95649ad7b009ace11
62c47d69fc1f119daf09e6876f57b1a4e7423c54258d87c442aeab77ab55448f48b4340e47a48e65828
fd803e383b5eea36b25fe29fee23883305a1afe7ac380fae85ce6fcf8a29baad39999fdd856f64e4906
8468e9159c4fddfaa8c9228937b3ee1ad3d00eb4d0991f718997c5de1a5e943ee6f04c5fac01dbed9c2
207ebec3498e3fc1ece2c0bf1b1eb78d001ccbc8d575b5217487477a6b2c6c360d8b21c40fc839d23a5
d7339c4cb76c3b651262b7b2344e23753a20122e91301299c8970e63f7438232c7c6a7a708636f1dc64
74f280073027bdc3fbb417b2707915082b97a62e220692057a01b17da579b22598a410ddeb249ab7efa
5fd6134669fc24f1e36c9027338cb92ed87f773273d41b4018da9e582248dda0b066d326d325fab9e49
f98d60ba9260891ef2173aeaf3270dd6e3a9b9aaca0dd42076635e007d5eab7098afd7197ec8a3b7cf3
c15b99a95bd4df6a093cf14dc903e61444d8b3d80de8fd37445b8bac06d18c5e16f92b8f57e36c2acf2
67781fe2a73655736bc4c9349c2b7f3de1e3a2fe28cf6921eb4552ce8b49cf37be0693a4e5619d8e8aa
9e6ff053746a39efb2dff05cb2a7c247a1c910bd344ccf242a900c872033c29abda8468efe291a1d8e3
1e3ffce1c04d98f7ed06fcc47be5e3b567525f06a4b9dadabb9a6163756df42b5e3ac69bd53b41da1ef
463f1355dd5706dda1f451ee35b8f52b21d49d05cdd2f1411069c86678cc0c38d4bfd3c7559e50ada0e
9616a1c696c91bba3aa938448edcee9a3b0140543acfcfdc03188ac2265b12de017c24da12574611120
8f3601a5214c353d9b527c929eca0cc865fe7b7bfa3521546dd8538d4277f1d4cf08ada995718e384dc
98674c5a78e9839ba551ebc59231dd653e913dd436ad05982048e780332d1cdf9f3eb7e2

TRACE DISABLED
:58.183 status=snd_host log=01 hst_msg_vers=0x30 serv_addr=0x01 int_msg_nr=0x3d
arrival=0769949719 DEParture=0769949759 delta=0000000040
HST_CMD
len=001035fe3001000f0500000000000000000000000032f5ff0100010003e8b24afcd6d5fd3613972
d03e4b8e41bf54ed12de4af4c0bb102bfba26fd5a61f4b7731ab265bd16ceb3b379c80005080877c774
cdd2cbd54142f9ae9d9575b95ced099be64c02bf203cd6231becf902280a316d92226c235dcd7a432f4
d61c6aef00e58ba60f6a2d5169a34088c9de0fe54f6877d190cf86128b67e8bb7bd4025de1981addc0a
c2d9a83634de5520ee3af63e908f729ce7fe4cd93ace2959d722e8e599af0fb0256e7d47ef4d2e085ef
ec356cf2b3f739ce666d0031fcc3e9c6b767224a6ab01260b448c333db40de272d5e05a2795090241e8
3c7b1520c5b6d862014f1a89185558122a75b8650a844f87cfc05f3d2c6b8b7795786c348ede769b0b0
86ac24485535d582c2c96425e258a1ef102b3ce3b25fdf40425f06ab3d4413ae276d538ec4f71b3f32b
0f38b2269238e19438432d00a7879b74bd50579afd9c926346dda7a13d0afbbc8c95649ad7b009ace11
62c47d69fc1f119daf09e6876f57b1a4e7423c54258d87c442aeab77ab55448f48b4340e47a48e65828
fd803e383b5eea36b25fe29fee23883305a1afe7ac380fae85ce6fcf8a29baad39999fdd856f64e4906
8468e9159c4fddfaa8c9228937b3ee1ad3d00eb4d0991f718997c5de1a5e943ee6f04c5fac01dbed9c2
207ebec3498e3fc1ece2c0bf1b1eb78d001ccbc8d575b5217487477a6b2c6c360d8b21c40fc839d23a5
d7339c4cb76c3b651262b7b2344e23753a20122e91301299c8970e63f7438232c7c6a7a708636f1dc64
74f280073027bdc3fbb417b2707915082b97a62e220692057a01b17da579b22598a410ddeb249ab7efa
5fd6134669fc24f1e36c9027338cb92ed87f773273d41b4018da9e582248dda0b066d326d325fab9e49
f98d60ba9260891ef2173aeaf3270dd6e3a9b9aaca0dd42076635e007d5eab7098afd7197ec8a3b7cf3
c15b99a95bd4df6a093cf14dc903e61444d8b3d80de8fd37445b8bac06d18c5e16f92b8f57e36c2acf2
67781fe2a73655736bc4

…
```

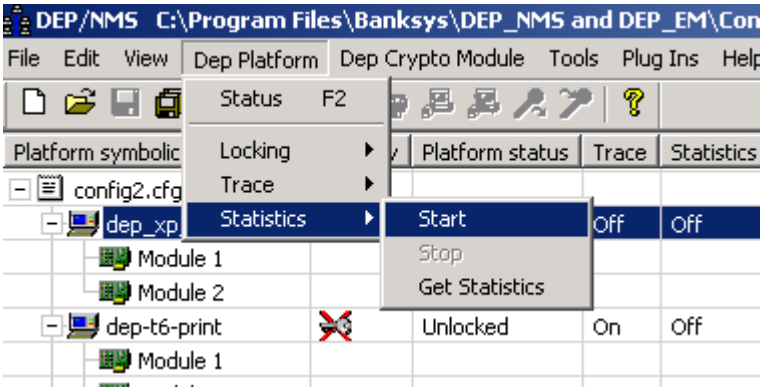
The tracing is allowed only when CAP_STD_TRACE capability is activated in the DEP Crypto Module(s) of the DEP.
In this case the trace file looks as follows:

```
000000690 001048576
TRACE CREATED
22/03/2007 13:33:43.348 status=snd_host log=00 hst_msg_vers=0x30 serv_addr=0x01
int_msg_nr=0x00
arrival=0768374874 departure=0768374924 delta=0000000050
HST_CMD len=000017
HST_RSP len=000006

22/03/2007 13:34:41.272 status=snd_host log=00 hst_msg_vers=0x30 serv_addr=0x01
int_msg_nr=0x01
arrival=0768432837 departure=0768432848 delta=0000000011
HST_CMD len=000084
HST_RSP len=000015

TRACE DISABLED
```

## 7.4. MANAGING STATISTICS

The DEP Platform can record *statistics* about the messages exchanged between the DEP Platform and the hosts.

If you want to use this feature, you have to manually start the utility, as it is disabled by default.




The **Statistics** menu contains the following functions:

- **Start**
- **Stop**
- **Get Statistics**

Before you can consult the statistics, a statistics report must be written on the DEP Platform first.

### 7.4.1. Starting the statistics utility

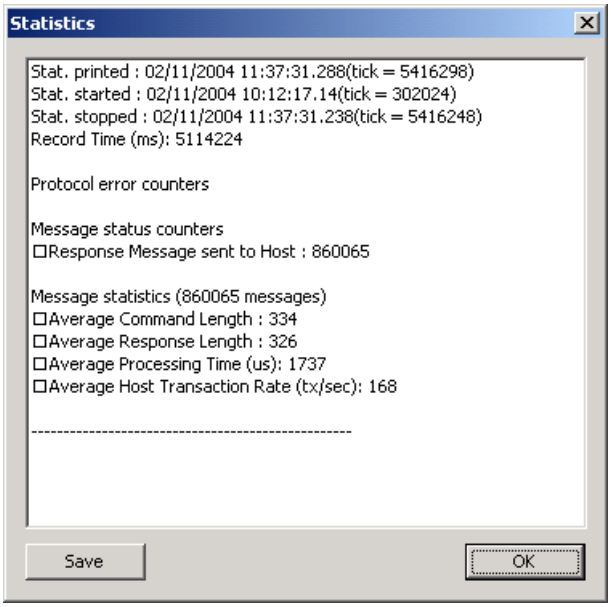
Use the function **Start** when you want to include all the messages exchanged between DEP/NT and hosts in the statistics.
Only messages exchanged after the start of the utility are included in the statistics. In the main window of DEP/NMS, the status of the statistics facility of the selected DEP Platform is switched to *On***.**

### 7.4.2. Stop the statistics utility

If you want to stop the statistics utility, select the function **Stop** from the **Statistics** submenu. In the main window of DEP/NMS, the status of the statistics facility of the selected DEP Platform is switched to *Off***.**

### 7.4.3. Getting the statistics information

When you select this function, the **Statistics** dialog box appears, presenting a text field with the *latest* information transferred from the DEP Platform to the DEP/NMS.


Statistics
Stat. printed : 02/11/2004 11:37:31.288(tick = 5416298)
Stat. started : 02/11/2004 10:12:17.14(tick = 302024)
Stat. stopped : 02/11/2004 11:37:31.238(tick = 5416248)
Record Time (ms): 5114224
Protocol error counters
Message status counters
Response Message sent to Host : 860065
Message statistics (860065 messages)
Average Command Length : 334
Average Response Length : 326
Average Processing Time (us): 1737
Average Host Transaction Rate (tx/sec): 168
Save
OK

The table below gives an overview of the items that appear in the dialog box and their meaning.

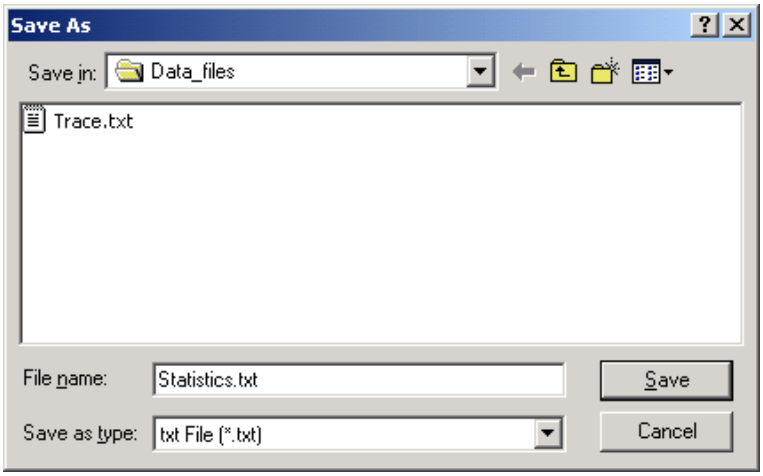
| Item | Meaning |
|---|---|
| **Stat. printed** | Indicates that date and time the report is generated and written in the zone |
| **Stat. started** | Defines when the statistics utility has been started |
| **Stat. stopped** | Defines when the statistics utility has been stopped if that has been the case |
| **Record Time (ms)** | Shows the time-frame in milliseconds during which the statistics were recorded |
| **Protocol Error Counters** | Gives a list of the protocol errors that were detected and a counter that indicates the error frequency |
| **Message status counters**<br>**Response Message sent to Host** | |
| **Message statistics** | Indicates the number of messages that were treated and lists some averages about those messages: |
| **Average Command Length** | Indicates the average length of the messages sent by the DEP/NT to the DEP Crypto Module; |
| **Average Response Length** | Indicates the average length of the responses sent from the DEP Crypto Module to the DEP/NT; |
| **Average Dep Processing Time** | Indicates the average time (in microseconds) that the DEP Crypto Module needs for processing the messages; |

| | |
|---|---|
| **Average Host Transaction Rate** | Indicates the average number of messages per second that the DEP Crypto Modules processed. |

To save the statistical data locally in a file, click the **Save** button at the bottom of the dialog box. A **Save As** dialog box will open to specify the path and name of the statistics file.
The filename presented by default is:

- Statistics.txt if statistical data is saved for the first time
- the name of the statistics file that was last used if statistical data has been saved before

If the file already exists, DEP/NMS requests confirmation to overwrite it.




By default, the status files are saved in the `Data_files` subfolder with path `"C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows 2000 and XP, and `"C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows Vista and Windows 7 respectively.

When you have specified the name and location of the file, DEP/NMS starts writing the data to the local statistics file.

***Warning:***

The Statistics utility must be stopped before you can write the data to a file.

# 8. MANAGING DEP CRYPTO MODULES

To obtain information about a DEP Crypto Module or carry out an operation, you need to select the DEP Crypto Module(s) from the configuration tree in the main window. To select the DEP Crypto Module(s) click on the line(s) with appropriate DEP Crypto Module(s).

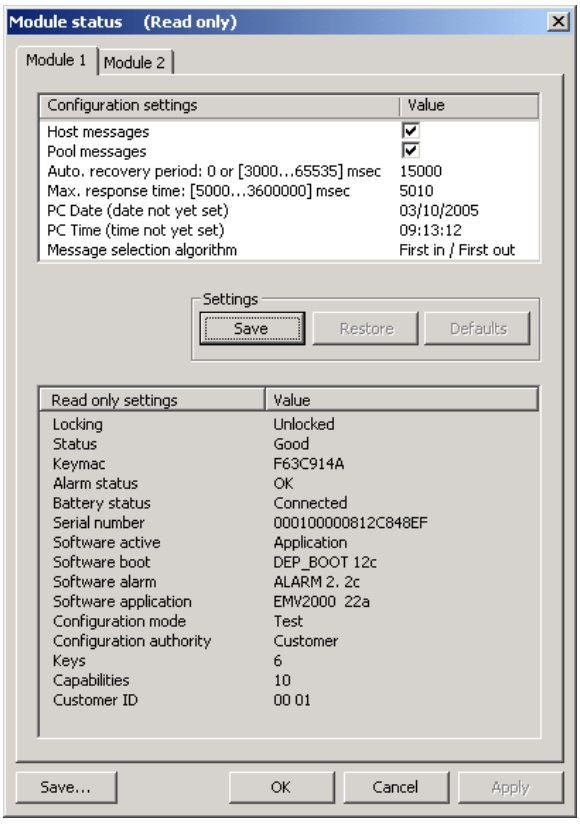
The functions that you can apply to a DEP Crypto Module can be accessed in any of the following ways:

- via the **DEP** Crypto Module menu
- via the context menu that opens when you right-click the platform
- via an icon on the toolbar
- via a shortcut key (refer to **ANNEX B: Function keys and shortcuts** on page 138).

## 8.1. HANDLING MODULE STATUS INFORMATION

### 8.1.1. Requesting status information

To open the DEP Crypto Module's status information dialog-box select the appropriate DEP Crypto Module and choose **Status** item from **DEP Crypto Module** menu or press the **F3** function key.
The **Module Status** window appears, presenting a tab sheet for each managed DEP Crypto Module.



## 8.1.2. Interpreting module status information

The **Module Status** window contains the **Configuration settings** and **Read only settings** of DEP Crypto Module.

The table below gives an overview of the read only settings and their meanings.

| Item | Meaning |
|---|---|
| **Locking** | Indicates whether the DEP Crypto Module is locked, locked by another user or unlocked |
| **Status** | Indicates whether the DEP Crypto Module is in good mode or in fatal mode |
| **Keymac** | Indicates the authentication code calculated over all the keys:<br>between `00 00 00 00` and `FF FF FF FF` or '`Not Available`') |
| **Alarm status** | Indicates the status of alarms<br>– `OK`<br>– `Intrusion`<br>– `Removal`<br>– `Temperature`<br>– `PIC`<br>– `RAM`<br>– `Motion`<br>– `Battery`<br>– `Vcc Off` |
| **Battery status** | Shows whether the battery is connected:<br>– `Connected`<br>– `Not Connected` |
| **Serial number** | Gives the serial number of the DEP Crypto Module. If this value does not correspond to the value expected, a warning appears (See also the section **Automatic refresh** on page 117) |
| **Software active** | Indicates what software is active:<br>– `Boot`<br>– `Application` |
| **Software boot** | Shows the name and the version number of the available boot software |
| **Software alarm** | Shows the name and the version of the available alarm software |
| **Software application** | Shows the name and the version number of the loaded application |
| **Configuration mode** | Indicates in what mode the DEP Crypto Module is configured:<br>– `Development`<br>– `Test`<br>– `Live`<br>– `None` |
| **Configuration authority** | Shows the available authority level of the DEP Crypto Module: |

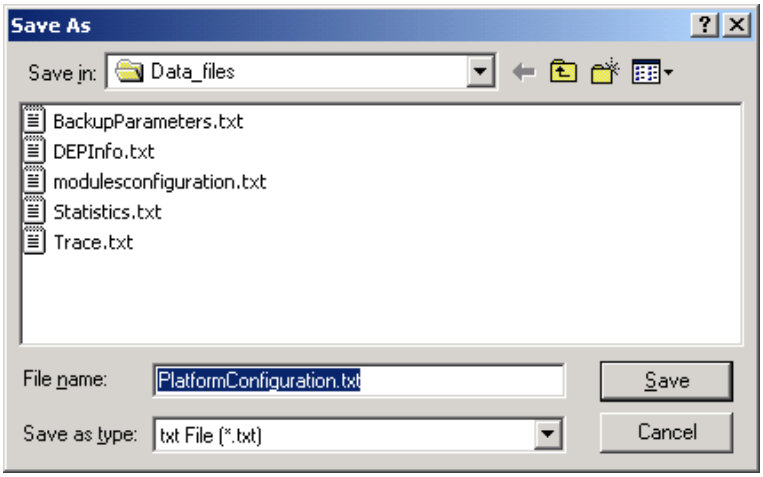
| | |
|---|---|
| | – None<br>– Banksys<br>– Customer |
| **Keys** | Indicates the number of keys loaded |
| **Capabilities** | Indicates the number of capabilities loaded |
| **Customer ID** | Represents the unique identification number of the customer |

### 8.1.3. Saving status information

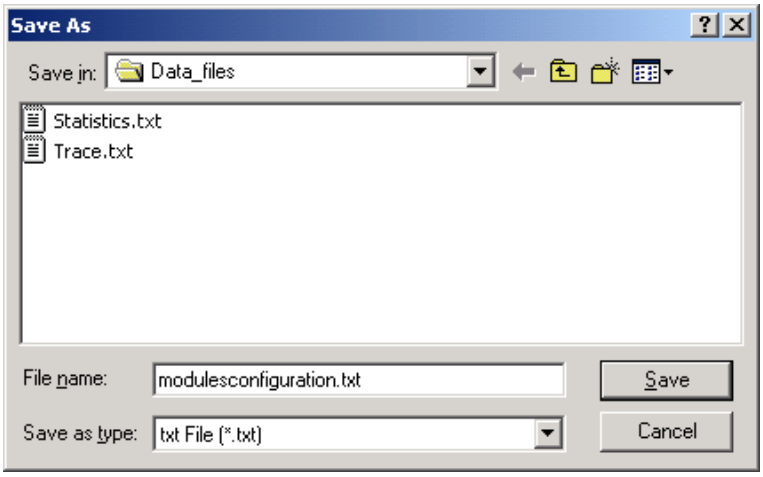
You can save the status information of the DEP Crypto Modules into a text file. Press **Save** at the bottom of the **Module status** window. In the **Save As** dialog box that appears, supply the name of the destination file.

The filename presented by default is:
- ModulesConfiguration.txt if status data is saved for the first time
- the name of the status file that was last used if status data has already been saved

If the file already exists, DEP/NMS requests confirmation to overwrite it.




By default, the status files are saved in the `Data_files` subfolder with path `"C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows 2000 and XP, and `"C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows Vista and Windows 7 respectively.




### 8.1.4. Modifying configuration settings

You can modify the **configuration parameters** that are in the upper part of the window, related to the module configuration, if the module is in *locked* mode.

The table below gives an overview of the parameters, their meaning and their default value.

| Parameter | Meaning |
|---|---|
| **Host messages** | If set, this attribute enables the DEP Crypto Module to process command messages sent by the host.<br>Otherwise, the module is able to process only command messages generated by one of the internal applications constituting the DEP Platform system. This mode is enabled by default. |
| **Pool messages** | If set, this attribute puts the DEP Crypto Module in the pool of DEP Crypto Modules that are able to process command messages sent to the DEP POOL (`device address = POOL`);.<br>Otherwise, the DEP Crypto Module may process only command messages explicitly sent to it (enabled by default).<br>For more details, refer to the document *DEP Host Interface Protocol*. |
| **Automatic recovery period** | The amount of time that the DEP Handler waits before trying to re-establish the communication with a DEP Crypto Module that was in fatal mode |
| **Maximum response time (in msec)** | The maximum amount of time that the DEP Handler waits for a response message from the DEP Crypto Module after the DEP Platform has sent a message to the DEP Crypto Module. When the DEP Crypto Module fails to respond within |

| | |
|---|---|
| | the maximum response time allowed, the mode of the DEP Crypto Module is automatically changed to FATAL.<br>The default value is 5000 milliseconds, but for long operations, such as RSA key generation, it may be necessary to take a bigger value, for example 120000 milliseconds. |
| **Date** | The date of the DEP Crypto Module |
| **Time** | The time of the DEP Crypto Module |
| **Message selection algorithm** | Defines the priority of the different type of command messages that could arrive |
| **First In / First Out** | All command messages are processed in the order they arrive (first command message that arrives is treated first). This is the default value. |
| **Host Messages First** | Priority is given to the command messages coming from the host; the command messages generated by other processes are treated when there are no more host command messages to process, |
| **Pool Messages First** | Priority is given to the command messages sent to the POOL device address; the command messages sent to the dedicated DEP Crypto Module are treated when there are no more pool messages to process. |

With regard to the settings, different operations are possible, depending on the button that you press:

- **Save:** Stores the information of the user into the configuration file, in order to quickly configure other DEP Crypto Modules
- **Restore:** To retrieve the information saved during the save operation
- **Defaults**: Sets the fields to the default factory values coming from the DEP Crypto Module

***Remark:***

If the RTC (Real Time Clock) has never been set before, this value is empty. The Real Time Clock can only be set or modified when the capability CAP_STD_SET_RTC is available in the DEP Crypto Module.

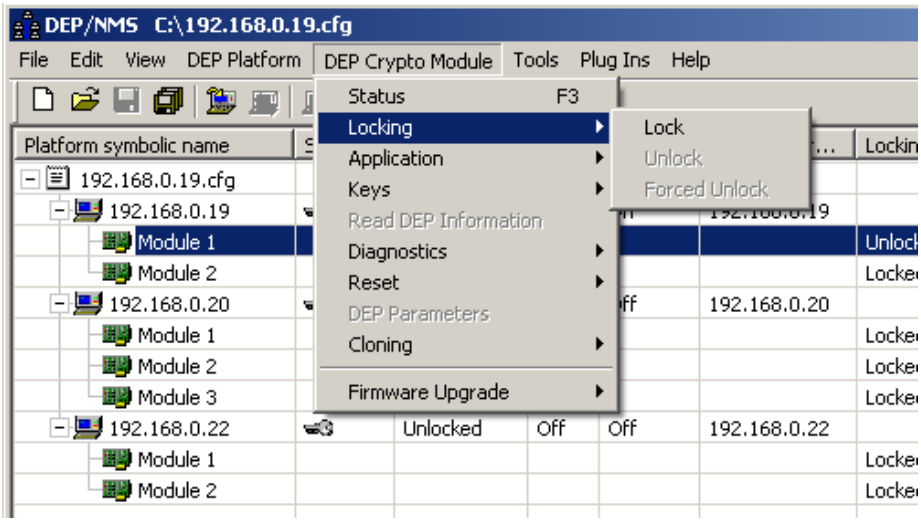
## 8.2. HANDLING CRYPTO MODULE LOCKING

Like DEP Platforms, DEP Crypto Modules can be accessible to multiple users at the time. But a user may want to lock the module, thus reserving it exclusively to himself. The **Locking** submenu in the **DEP Crypto Module** menu presents functions to control the locks on a DEP Crypto Module.

The submenu offers the following functions:

- **Lock**
- **Unlock**

- **Forced Unlock**




### 8.2.1. Lock

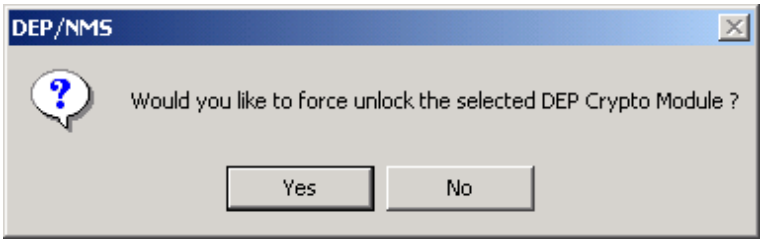
This function lets you lock the DEP Crypto Module, after which it is no longer capable of processing command messages from the host.
The **Status** of the DEP Crypto Module on the DEP/NMS is changed to `Locked`.

### 8.2.2. Unlock

With this function you "free" the DEP Crypto Module, thus enabling it to process command messages from the host.
The **Status** of the DEP Crypto Module on the DEP/NMS is changed to `Unlocked`.

### 8.2.3. Forced unlock

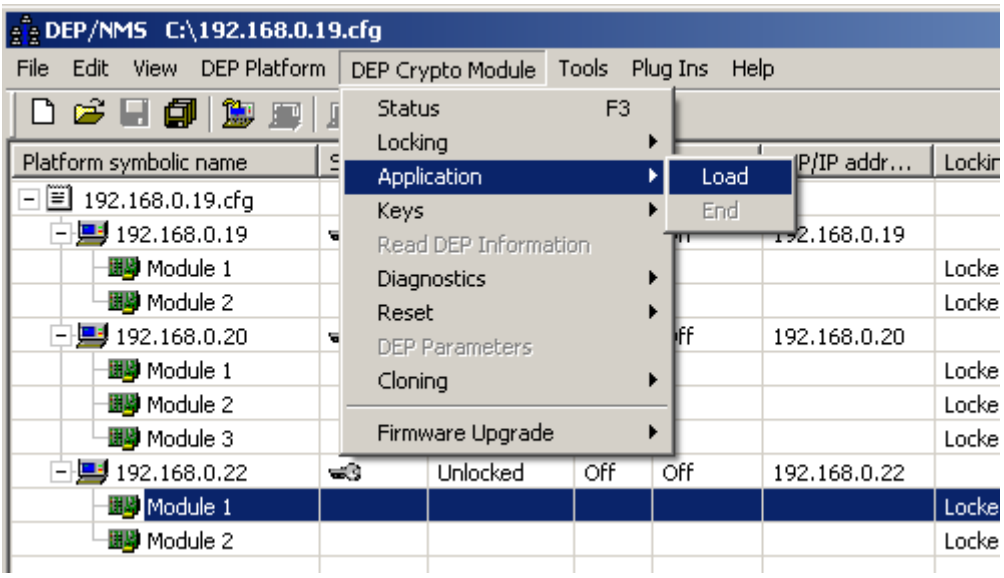
With this function, you can unlock a DEP Crypto Module that is already locked by another DEP/NMS instance in order to lock it yourself, thus preventing access by, for example, a host for commands or by another DEP/NMSs for modifications.
The status of the DEP Crypto Module in the main window is now `Unlocked`.
Before the DEP Crypto Module is unlocked, you are prompted for a confirmation.




After that, you can lock the DEP Crypto Module.

## 8.3. MANAGING APPLICATIONS

The **Application** submenu contains functions for **loading** and **ending** DEP Crypto Module applications.




## 8.3.1. Loading application software on DEP Crypto Module(s)

### 8.3.1.1. Starting the operation

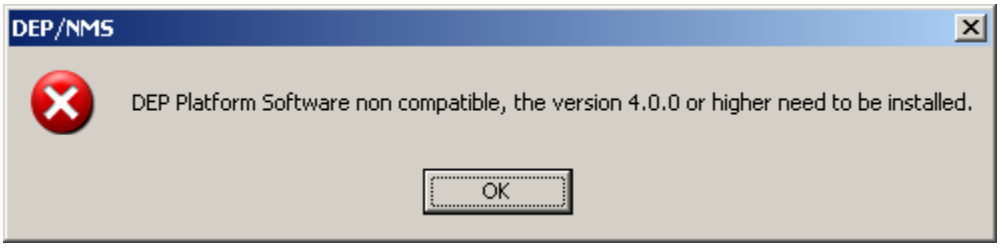
Software loading operation allows loading DEP application software in one or more DEP Crypto Modules. Operation can be done on each DEP Crypto Module sequentially or on different DEP Crypto Modules of one or several DEP Platforms simultaneously.

Select the **Load** function from the **Application** submenu or click the icon on the toolbar to load dedicated Application Software in selected DEP Crypto Module(s).

***Warnings:***

You must *lock* the DEP Crypto Module(s) before executing this operation.

Simultaneous **Application load** operation for multiple selected DEP Crypto Modules is possible on DEP Platform software with version 4.0.0 or higher. Otherwise the following error box will appear.

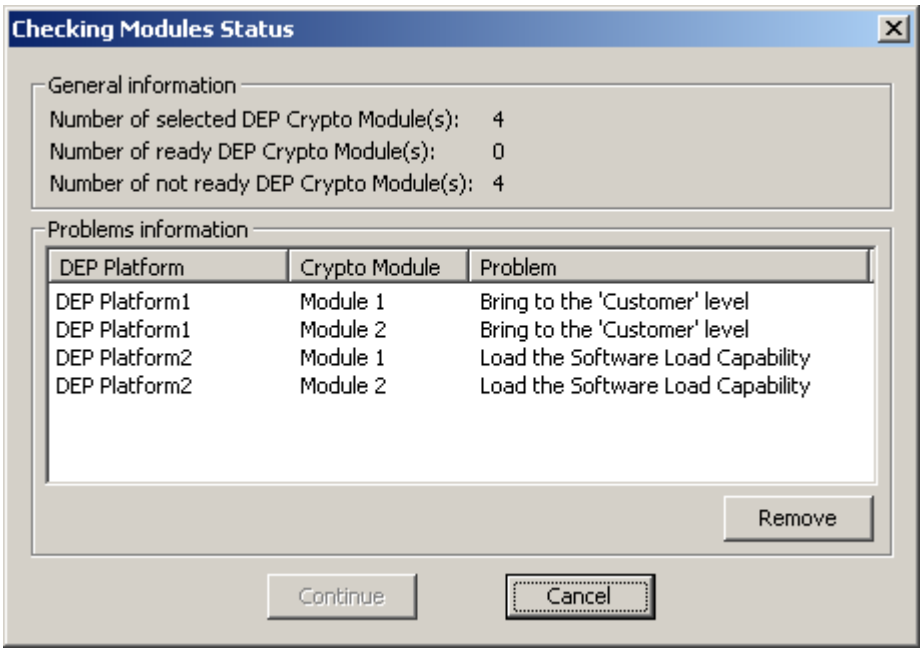



Loading of application software in more than one DEP Crypto Modules is only available if you have the Hardware Licence USB dongle.

The first phase of the **Load** operation consist of checking the three following conditions:

- Is the boot active?
  The Crypto Module(s) status should read: `Software active - Boot`
- Is the DEP Crypto Module(s) upgraded to `CUST` level?
- Is the `CAP_STD_SW_LOAD` capability loaded in the DEP Crypto Module? For detailed information on how to load the capability, refer to the *DEP C-ZAM/DEP User Manual*.

If one of those conditions is not fulfilled, an information dialog box (see below) appears with list of actions that user can take to bring DEP Crypto Module(s) to Ready state.
For example if some of selected DEP Crypto Modules are not initialized at the good level of authority or don't have `CAP_STD_SW_LOAD` capability loaded the following problems will occur:

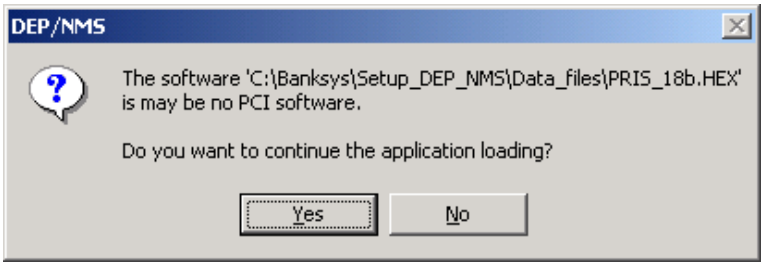

Checking Modules Status
General information
Number of selected DEP Crypto Module(s): 4
Number of ready DEP Crypto Module(s): 0
Number of not ready DEP Crypto Module(s): 4
Problems information
DEP Platform
Crypto Module
Problem
DEP Platform1 Module 1 Bring to the 'Customer' level
DEP Platform1 Module 2 Bring to the 'Customer' level
DEP Platform2 Module 1 Load the Software Load Capability
DEP Platform2 Module 2 Load the Software Load Capability
Remove
Continue
Cancel

While displaying the above information dialog box, application is doing background check for state of DEP Crypto Modules enumerated in **Problems Information** list. When one or more DEP Crypto Modules are brought to **Ready** state, **Problems Information** list and **General Information** will be updated in the dialog box.
It is possible to select and remove one or more not ready modules from **Problems Information** list.
**Continue** button will be enabled when in **Problem Information** list all DEP Crypto Modules will be in Ready state. To terminate software loading process for all selected DEP Crypto Modules click **Cancel**.

While loading application software in more than one DEP Crypto Module, additional checks are made after initial checking phase.
All selected DEP Crypto Modules must be in the same mode (DEV, TST or LIV), otherwise the following warning message box will appear.

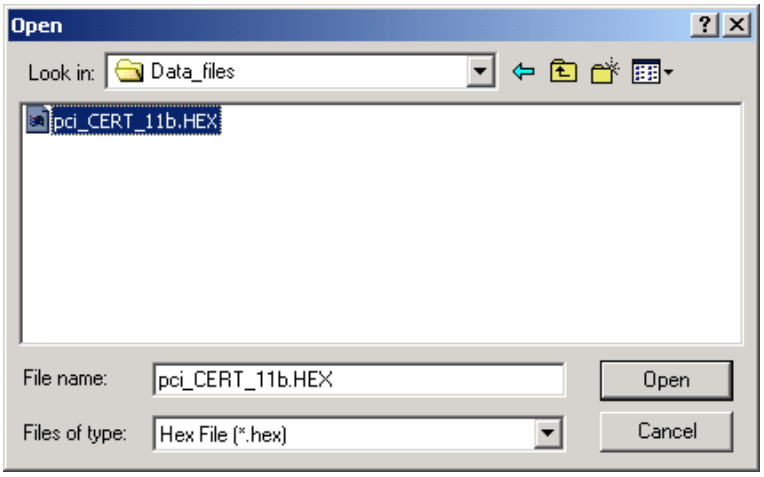
All selected DEP Crypto Modules must have the same CUSTOMER ID, otherwise the following warning message box will appear.

If the application is not PCI software, you are prompted for confirmation to continue the loading.


DEP/NMS
The software 'C:\Banksys\Setup_DEP_NMS\Data_files\PRIS_18b.HEX' is may be no PCI software.
Do you want to continue the application loading?
Yes
No

### 8.3.1.2. Selecting the application

When all the DEP Crypto Modules are ready and the Continue button is enabled, you should select the application you want to load on DEP Crypto Module. Select the application software in opened **Open** dialog box and click **Open**.




The input file containing the Application Software must either be an:

- *Intel 16 bit HEX* format (with HEX file extension)

- encrypted Application Software file (with HEE file extension).

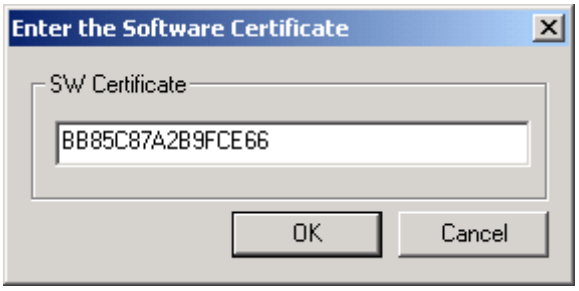
If you load an application for the first time, the path that is presented is "C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM\Data_files" for Windows 2000 and Windows XP, and "C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM\Data_files" for Windows Vista and Windows 7 respectively.

If applications have been loaded before, the name of the last application file is presented.

#### 8.3.1.3. Entering the certificate

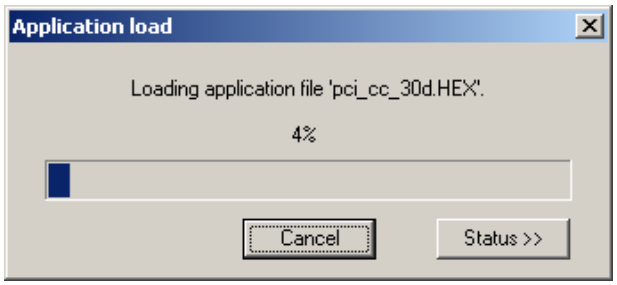
After you have selected the Application Software, you have to enter the *Software Certificate*, that is, the Software Authentication Code.
The SW Certificate can be found in the appropriate Software Authentication Code File (.sac) that is delivered together with the Application Software.

In the **Enter the Software Certificate** dialog box fill in the correct SW Certificate information.
By default, the Software Authentication Code that was last used is presented.

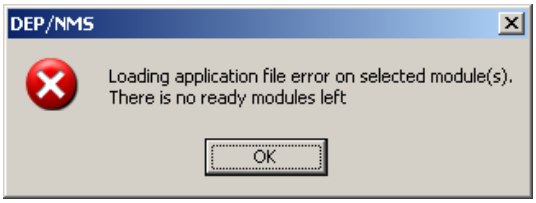



#### 8.3.1.4. Monitoring the loading process

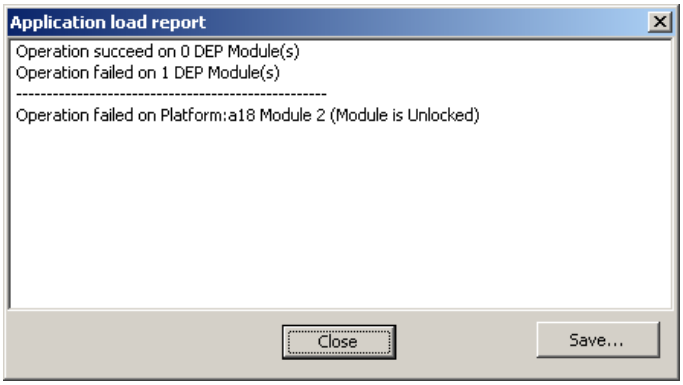
During the actual loading of the application, the **Application load** dialog box will appear, displaying the progress of the process. It also displays the name of the application that is being loaded.



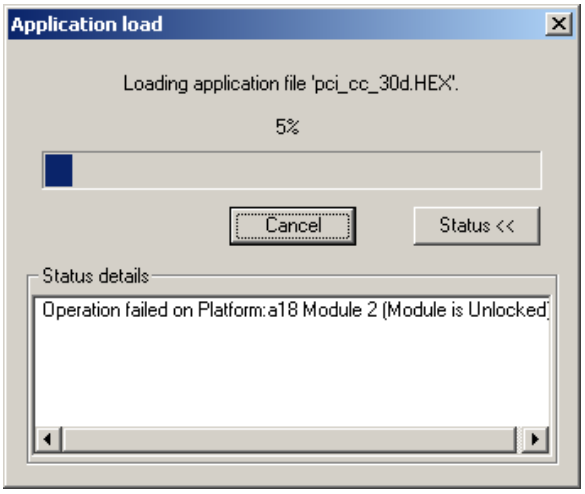

If there is no ready DEP Crypto Module left during the loading process to proceed with the load operation, the following error box appears, and the load process is interrupted.



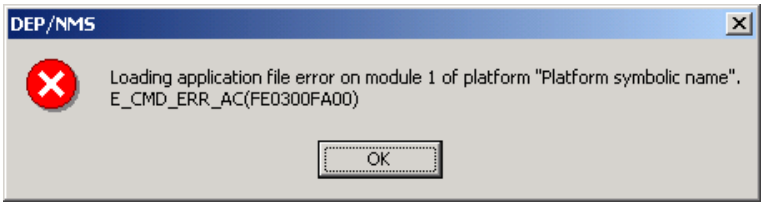

After pressing the **OK** button, the A**pplication load report** dialog appears with the total number of successful and failed DEP module(s). For each failed DEP module(s) there is a status line with the failure reason.


Application load report
Operation succeed on 0 DEP Module(s)
Operation failed on 1 DEP Module(s)
Operation failed on Platform:a18 Module 2 (Module is Unlocked)
Close
Save...

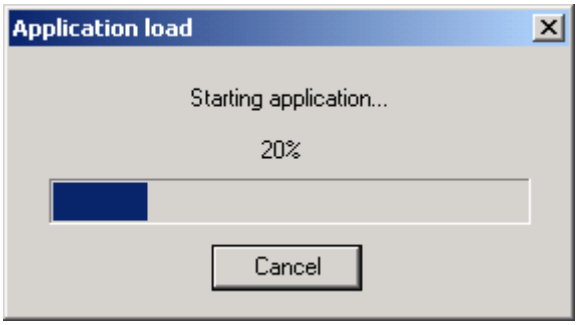
When multiple DEP Crypto Modules have been selected but not all of them are ready to proceed with the loading operation during the loading process, the **Application load** dialog box is expanded to show the status of the failed module(s).



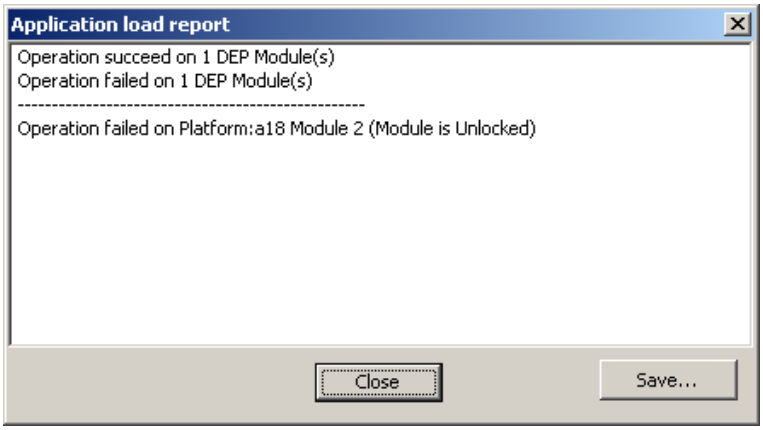

At the end of the loading process, the software certificate is verified. If it is not a valid certificate the following error box will appear:



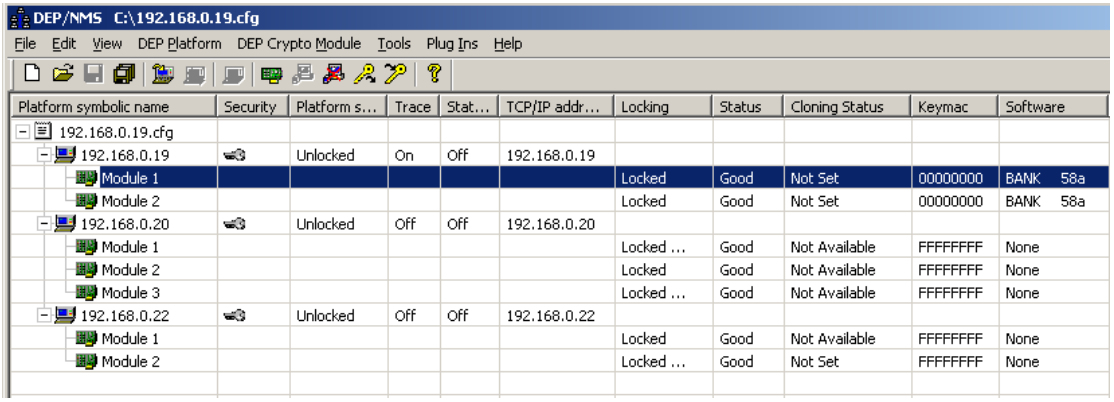

If the application was successfully loaded at least on one DEP Crypto Module successfully, it starts automatically:




If a DEP Crypto Module fails during the loading process, the **Application load report** dialog will appear, showing the total successful and failed DEP Crypto Module(s). For each failed DEP module there is status line with failure reason.




In the DEP/NMS main window information concerning the selected DEP Crypto Module(s) is automatically refreshed.


DEP/NMS C:\192.168.0.19.cfg
File Edit View DEP Platform DEP Crypto Module Tools Plug Ins Help
Platform symbolic name | Security | Platform s... | Trace | Stat... | TCP/IP addr... | Locking | Status | Cloning Status | Keymac | Software
192.168.0.19.cfg
192.168.0.19 | Unlocked | On | Off | 192.168.0.19
Module 1 | Locked | Good | Not Set | 00000000 | BANK 58a
Module 2 | Locked | Good | Not Set | 00000000 | BANK 58a
192.168.0.20 | Unlocked | Off | Off | 192.168.0.20
Module 1 | Locked ... | Good | Not Available | FFFFFFFF | None
Module 2 | Locked | Good | Not Available | FFFFFFFF | None
Module 3 | Locked ... | Good | Not Available | FFFFFFFF | None
192.168.0.22 | Unlocked | Off | Off | 192.168.0.22
Module 1 | Locked | Good | Not Available | FFFFFFFF | None
Module 2 | Locked ... | Good | Not Set | FFFFFFFF | None

The following fields will be updated:

- **Software**: displays the name and version number of the application loaded
- **Keymac**: initialized with `00 00 00 00`
- **Mode**
- **Authority**
- **Serial Number**: displays the serial number of the DEP Crypto Module.

### 8.3.2. Ending an application

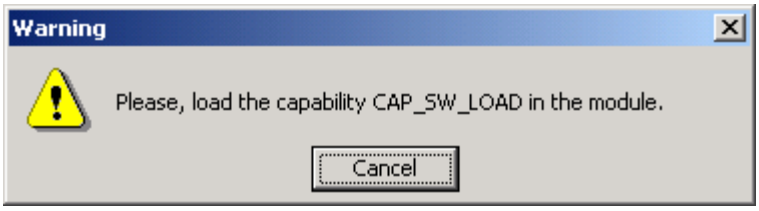
Select the **End** function from the **Application** submenu or click the icon on the toolbar to stop application software on the DEP Crypto Module.

***Warning:***

You must *lock* the DEP Crypto Module before executing this operation.

Ending the application software on DEP Crypto Module can only be done if:

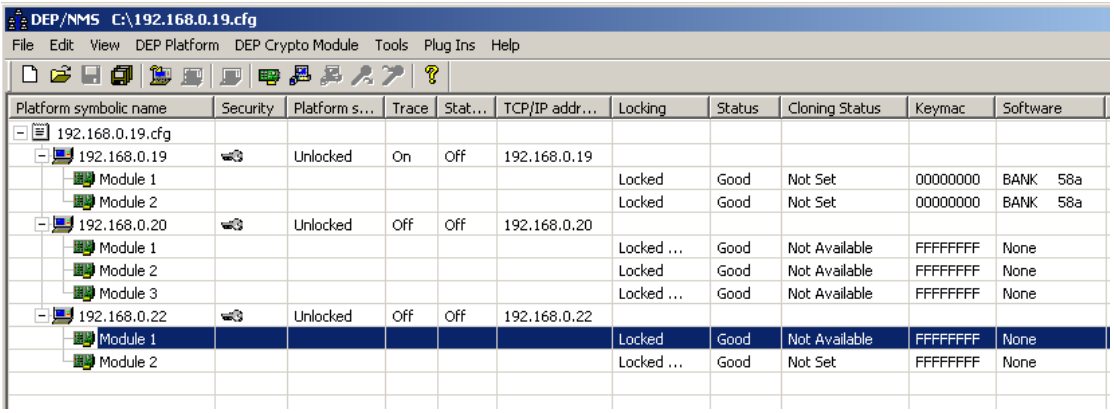
- there is a application software already loaded on DEP Crypto Module
- the CAP_STD_SW_LOAD capability is available in the DEP Crypto Module. If not, a warning box will appear:




This last condition is no more available for DEP Application Software released from April 24th 2008.

You are prompted for confirmation before the application is actually stopped.

Once the application is stopped, the information concerning the selected DEP Crypto Module in the main window is updated.




| Platform symbolic name | Security | Platform s... | Trace | Stat... | TCP/IP addr... | Locking | Status | Cloning Status | Keymac | Software |
|---|---|---|---|---|---|---|---|---|---|---|
| 192.168.0.19.cfg | | | | | | | | | | |
| 192.168.0.19 | | Unlocked | On | Off | 192.168.0.19 | | | | | |
| Module 1 | | | | | | Locked | Good | Not Set | 00000000 | BANK 58a |
| Module 2 | | | | | | Locked | Good | Not Set | 00000000 | BANK 58a |
| 192.168.0.20 | | Unlocked | Off | Off | 192.168.0.20 | | | | | |
| Module 1 | | | | | | Locked ... | Good | Not Available | FFFFFFFF | None |
| Module 2 | | | | | | Locked | Good | Not Available | FFFFFFFF | None |
| Module 3 | | | | | | Locked ... | Good | Not Available | FFFFFFFF | None |
| 192.168.0.22 | | Unlocked | Off | Off | 192.168.0.22 | | | | | |
| Module 1 | | | | | | Locked | Good | Not Available | FFFFFFFF | None |
| Module 2 | | | | | | Locked ... | Good | Not Set | FFFFFFFF | None |

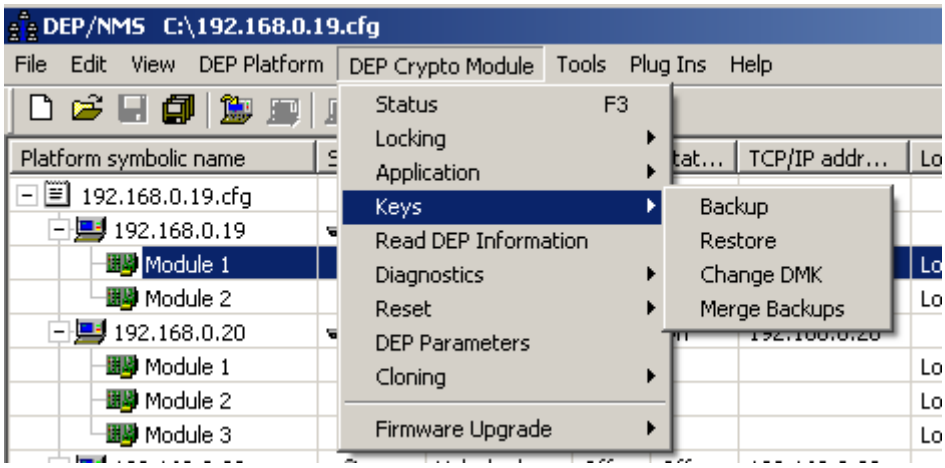
The following fields will be changed:

- **Software**: this field is cleared,
- **Keymac**: switches to FFFFFFFF**.**

## 8.4. MANAGING KEYS

The **Keys** submenu contains the following functions:

- **Backup**
- **Restore**
- **Change DMK**
- **Merge Backups**




### 8.4.1. Backing up keys

The **Backup** function lets you to create a secure backup of all the keys loaded into the DEP Crypto Module, except the DEP Master Key and other Special Keys.

> ***Warning:***
>
> You must *lock* the DEP Crypto Module before executing this operation.

Backing up keys requires availability of:

- the CAP_STD_SAVE_KEYS capability;
- DEP Master Key.

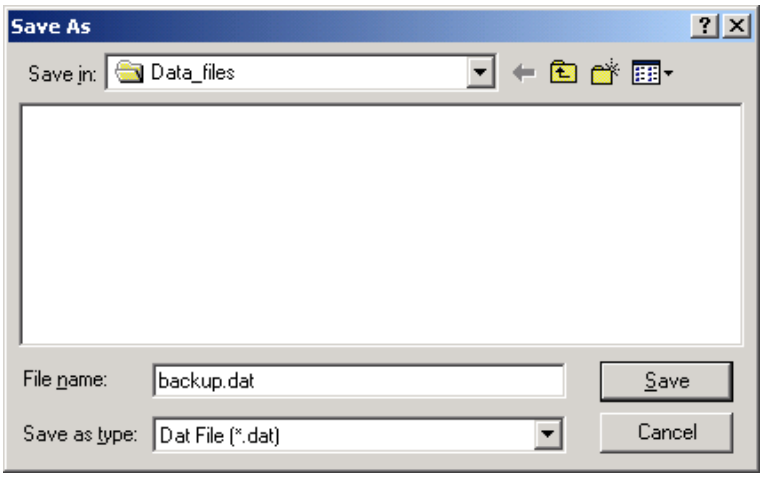
If that is not the case, you will be prompted for action.

To actually start to backup the keys, supply the name of the backup file in the **Save As** dialog box.

The filename presented by default is:

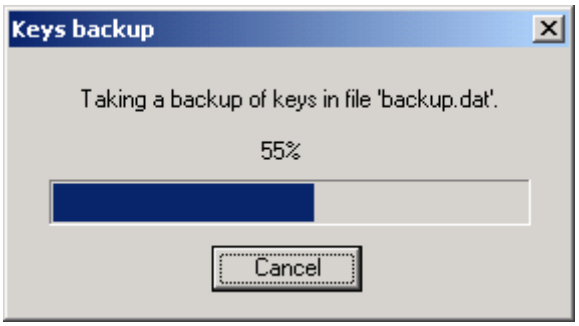
- *Backup*, if status data is saved for the first time
- the name of the backup file that was last used if a backup has previously been made

If the file already exists, DEP/NMS requests confirmation to overwrite it.




By default, the status files are saved in the `Data_files` subfolder with path `"C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows 2000 and XP, and `"C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows Vista and Windows 7 respectively.

The **Keys backup** dialog box will appear indicating the progress of the specified backup operation.




### 8.4.2. Restoring keys

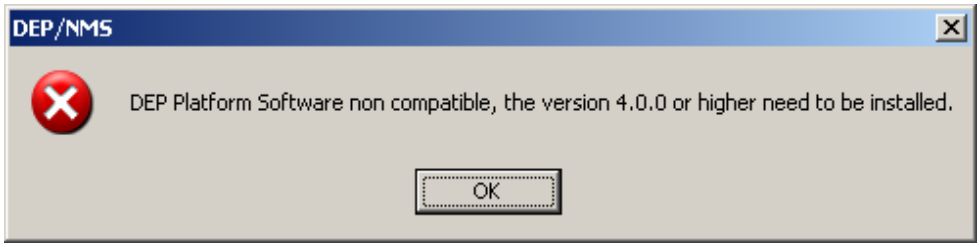
Restore keys operation allows restoring keys from a previous backup in one or more DEP Crypto Modules. Operation can be done on each DEP Crypto Module sequentially or on different DEP Crypto Modules of one or several DEP Platforms simultaneously.

Use the **Restore** function from the **Keys** submenu or select the icon from the toolbar if you need to restore keys from a previous backup.

***Warnings:***

- You must *lock* the DEP Crypto Module(s) before executing this operation.
- Simultaneous **Keys restore** operation for multiple selected DEP Crypto Modules is possible on DEP Platform software

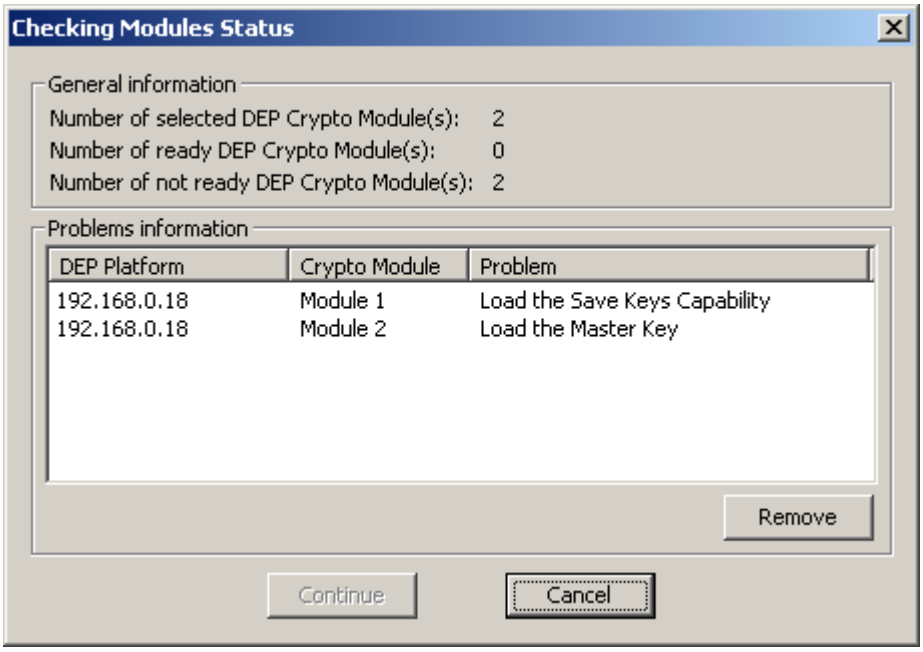
with version 4.0.0 or higher. Otherwise the following error box will appear.




- Simultaneous multiple DEP Crypto Module Restore Keys operations are only possible if you have the Hardware Licence USB dongle.

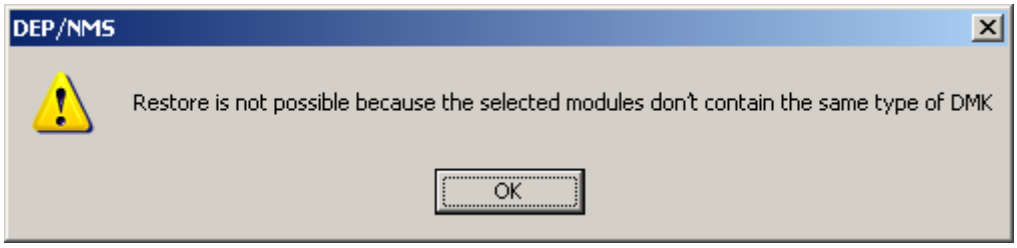
Restoring keys requires availability of:
- the CAP_STD_SAVE_KEYS capability;
- DEP Master Key.

If one of those conditions is not fulfilled, an information dialog box (see below) will appear with list of actions that user can take to bring the DEP Crypto Modules to **Ready** state.




While displaying the above information dialog box, application is doing background check for state of DEP Crypto Modules enumerated in **Problems Information** list. When one or more DEP Crypto Modules are brought to **Ready** state, **Problems Information** list and **General Information** will be updated in the dialog box.
It is possible to select and remove one or more not ready DEP Crypto Modules from **Problems Information** list.
**Continue** button will be enabled when in **Problem Information** list all DEP Crypto Modules will be in Ready state. To terminate software loading process for all selected DEP Crypto Modules click **Cancel**.

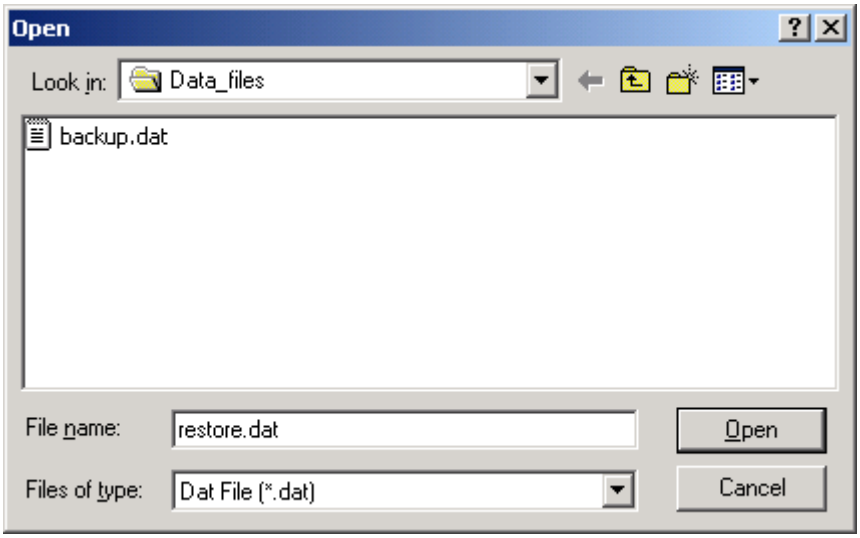
Restore keys operation for multiple selected DEP Crypto Modules is possible when all selected DEP Crypto Modules contain DEP Master Keys of the same type and with the same value. Otherwise the following warnings will appear and operation will be aborted.




To restore the keys supply the name of the backup file in the **Open** dialog box.

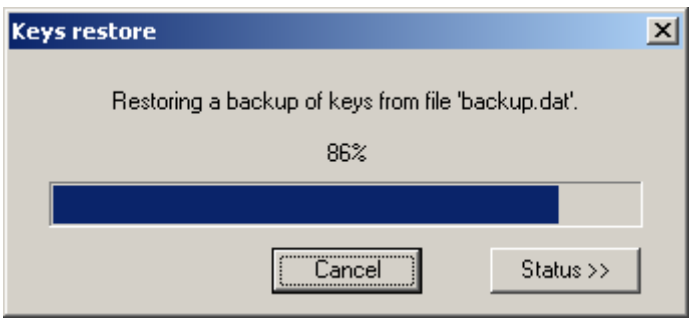
The filename presented by default is:

- `backup.dat` if keys are restored for the first time;
- the name of the restore file that was last used if keys have already been restored before.



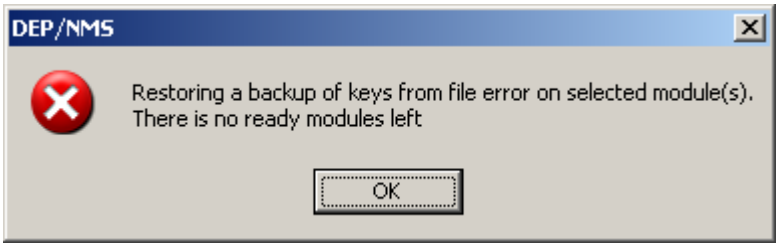

The default path for the backup files is "`C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM\Data_files`" for Windows 2000 and XP, and "`C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM\Data_files`" for Windows Vista and Windows 7.

When the correct backup file has been selected, the **Keys restore** dialog box will appear indicating the progress of the specified restore operation.

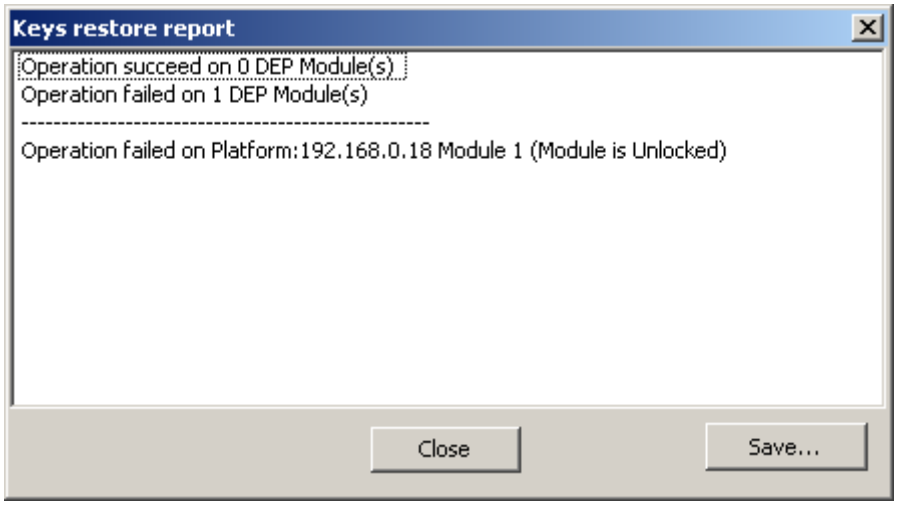


Update of the information in the main window is done.

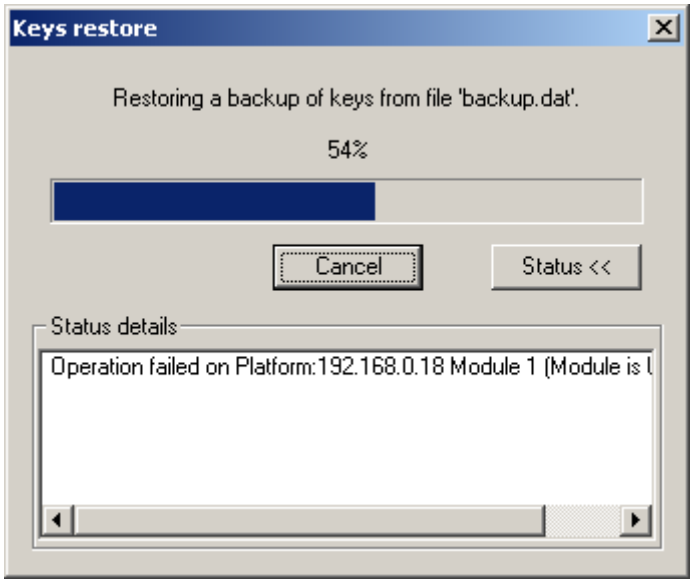
If during the key restore process selected DEP Crypto Module(s) are not ready to proceed with the key restore operation, the following error box will appear, and the restore process will be interrupted.



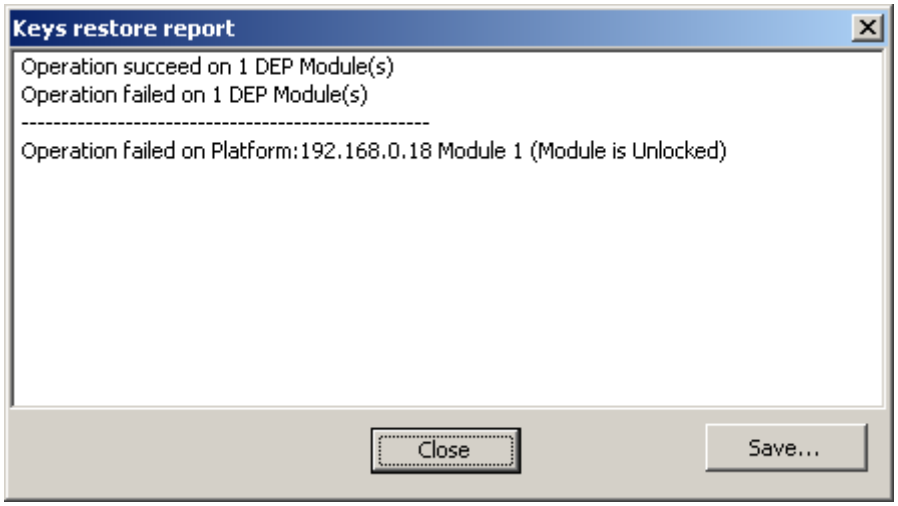

After pressing the **OK** button, the **Keys restore report** window will appear containing the total number of successful and failed DEP Crypto Module(s). For each failed DEP Crypto Module(s) there is status line with failure reason.


Keys restore report
Operation succeed on 0 DEP Module(s)
Operation failed on 1 DEP Module(s)
Operation failed on Platform:192.168.0.18 Module 1 (Module is Unlocked)
Close
Save...

If after multiple DEP Crypto Modules have been selected some of them fail to become ready to proceed with the key restore operation during the restore process, the **Keys restore** dialog box is enlarged to show the status of the failed module(s).

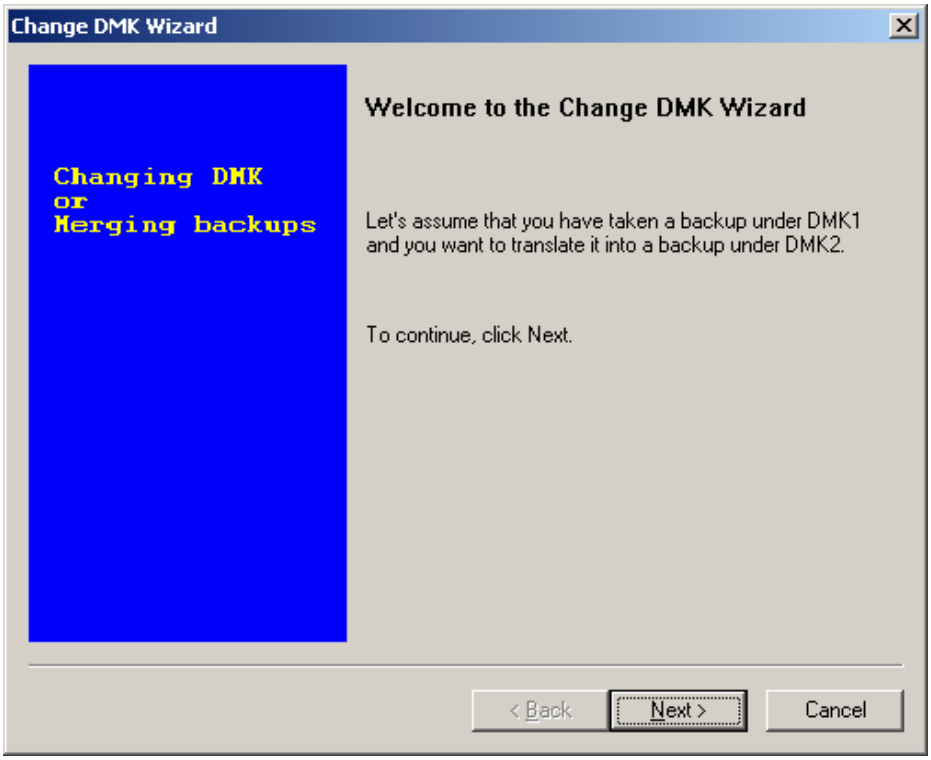


If there are failed DEP Crypto Modules at the end of keys restore process, the **Keys restore report** dialog appears, listing all the successful DEP module(s) and the failed DEP module(s). For each failed DEP module there is a status line with failure reason.

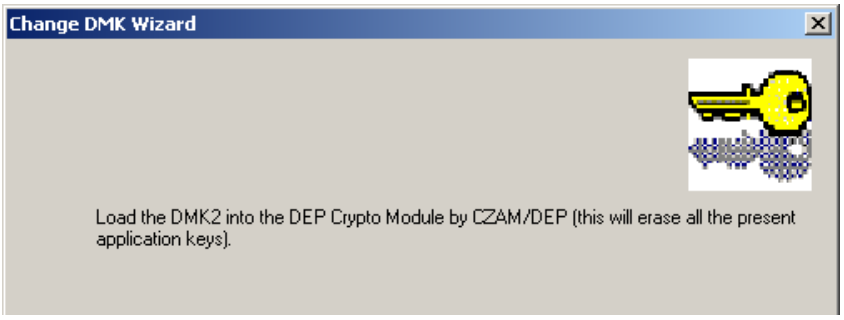



### 8.4.3. Changing the DMK

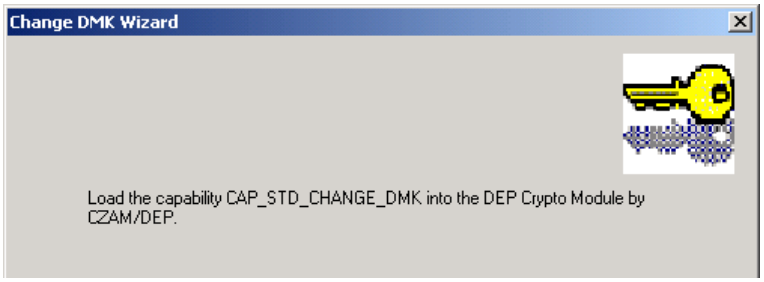
To change the DEP Master Key of a set of backed up keys select the **Change DMK** function from **Keys** submenu. The **Change DMK Wizard** will start.


Change DMK Wizard
Changing DMK
or
Merging backups
Welcome to the Change DMK Wizard
Let's assume that you have taken a backup under DMK1
and you want to translate it into a backup under DMK2.
To continue, click Next.
< Back
Next >
Cancel

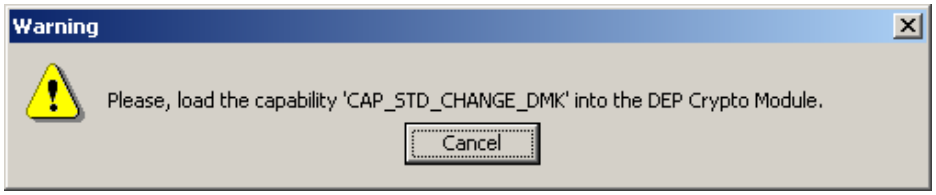
The wizard guides you through the different steps of the procedure. Follow the instructions and click **Next** to continue with the following step.
The series of images below show you the sequence of instructions that the wizard steps through.



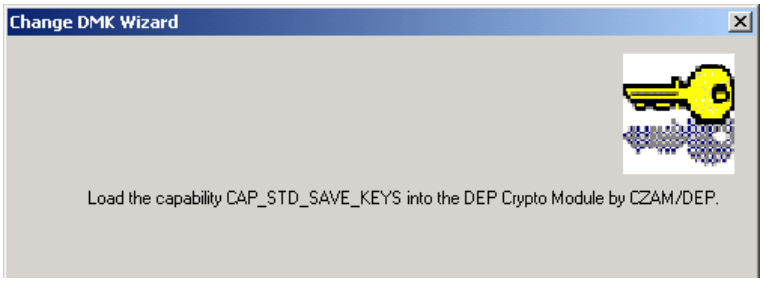

You *must* enter the DMK2 before you can continue with the next step.



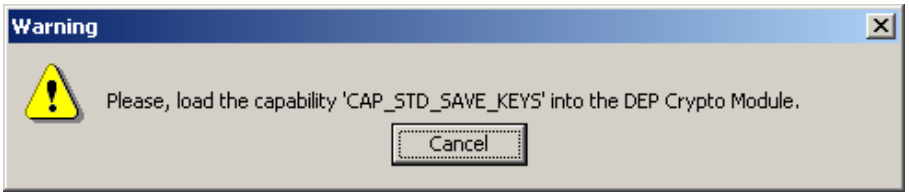

You *must* enter the capability `CAP_STD_CHANGE_DMK` into the DEP Crypto Module, before you can move to the next step.



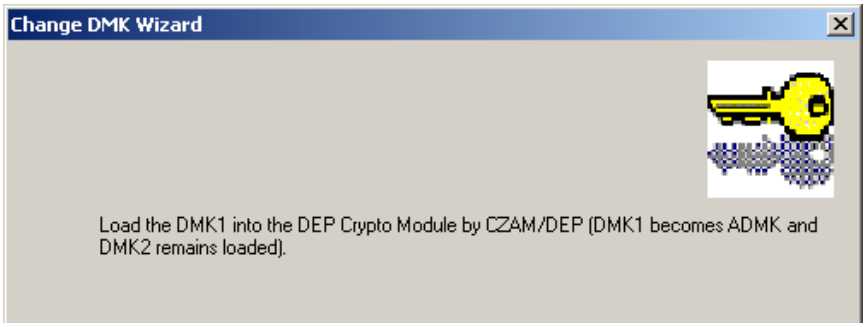

At this stage, you have to load the capability `CAP_STD_SAVE_KEYS` into the DEP Crypto Module.



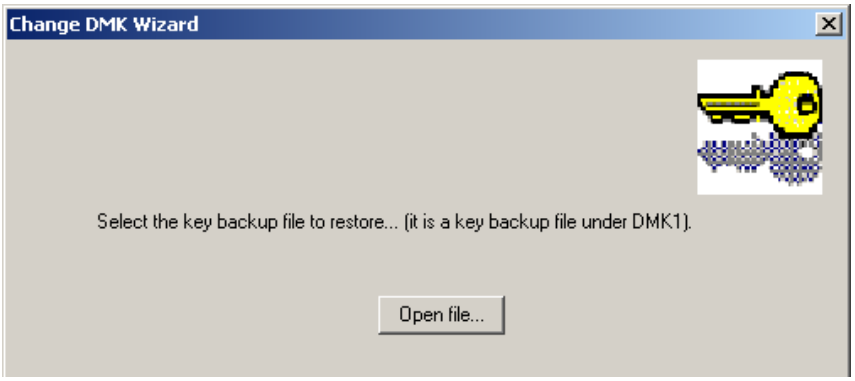

You *must* load the capability `CAP_STD_SAVE_KEYS` before you can go to the next step.



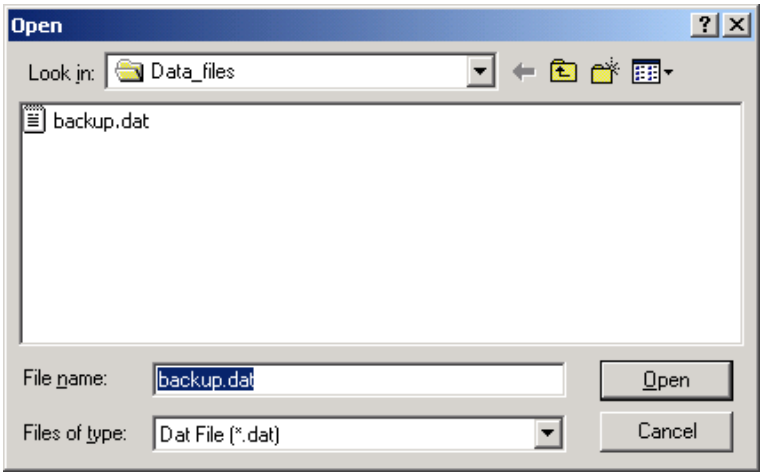

When the capability has been entered, you are prompted to load the DMK1.



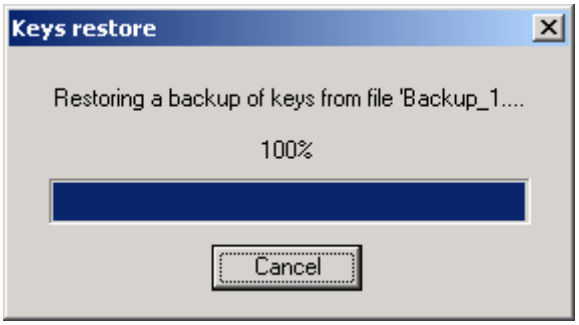

When you have entered this key, the wizard continues with the key backup file to restore.



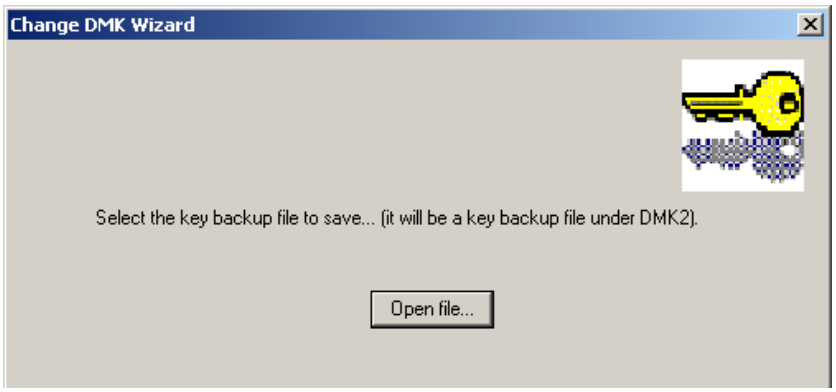

In the **Open** dialog box, select the file to restore.



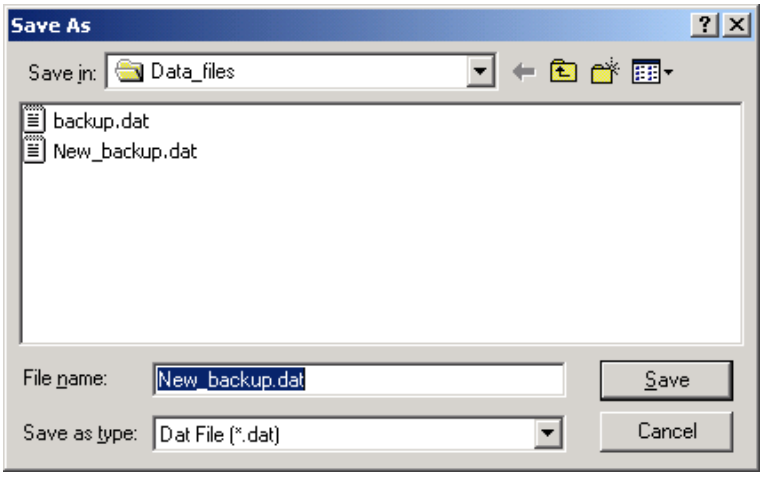

While the file is being restored, the **Keys restore** dialog box provides progress information.



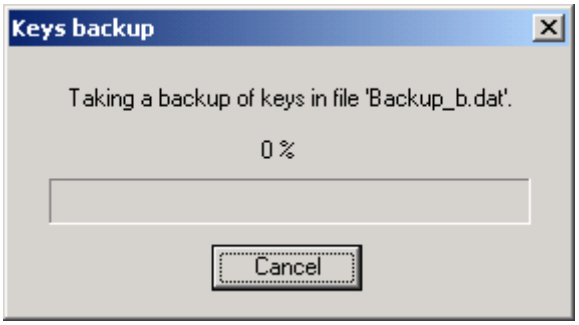

Next, the wizard prompts you for the file name for the key backup.



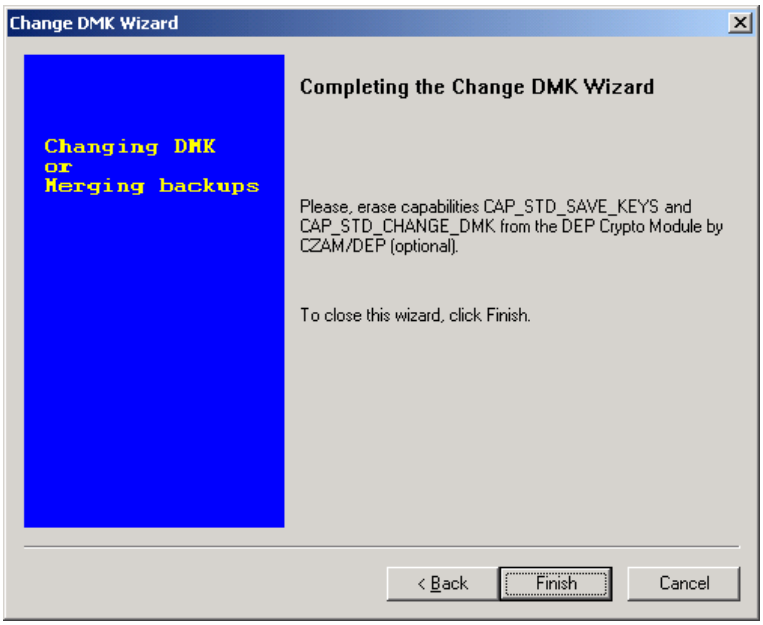

In the **Save As** dialog box, select the name of the backup file.




Then, the **Keys backup** dialog box will appear, providing progress information on the key backup.



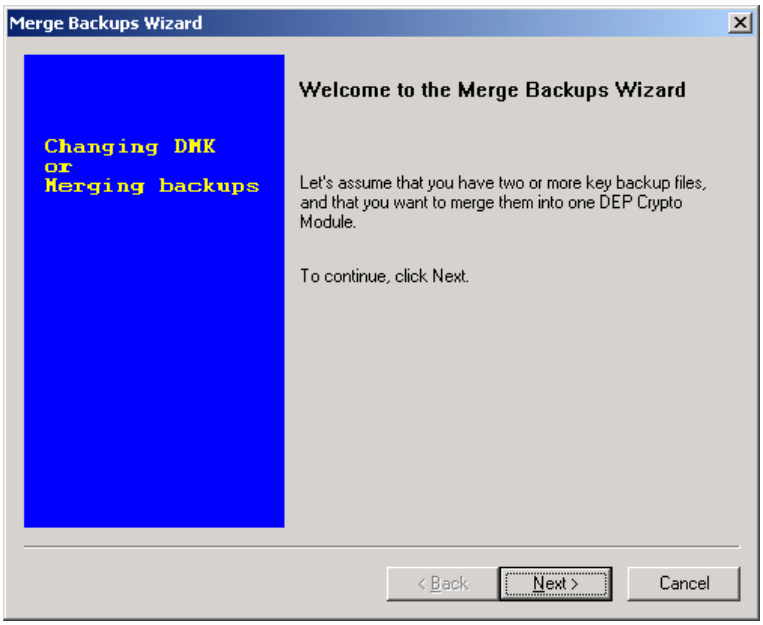
After that, the wizard presents the final stage of the operation. Click **Finish** to complete it.

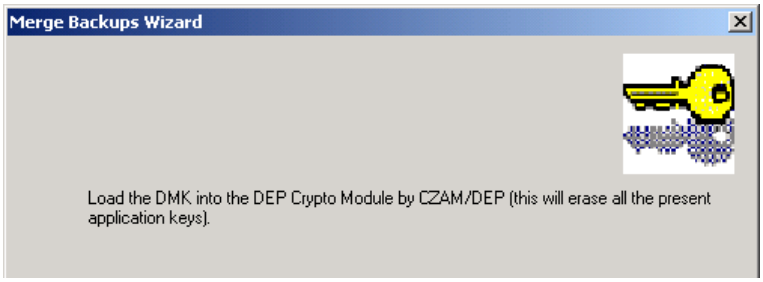



### 8.4.4. Merging backups

The **Merge backups** function from the **Keys** submenu allows to merge several key backup files into a DEP Crypto Module. The procedure is guided by the same wizard as changing the DMK.

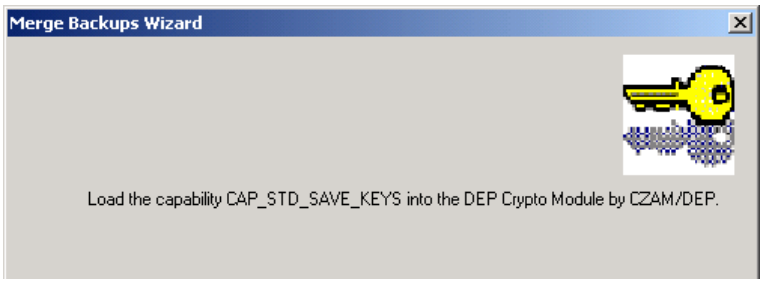
The images below show screenshots of the different sequences of the procedure.


Merge Backups Wizard
Changing DMK
or
Merging backups
Welcome to the Merge Backups Wizard
Let's assume that you have two or more key backup files, and that you want to merge them into one DEP Crypto Module.
To continue, click Next.
< Back
Next >
Cancel


Merge Backups Wizard
Load the DMK into the DEP Crypto Module by CZAM/DEP (this will erase all the present application keys).

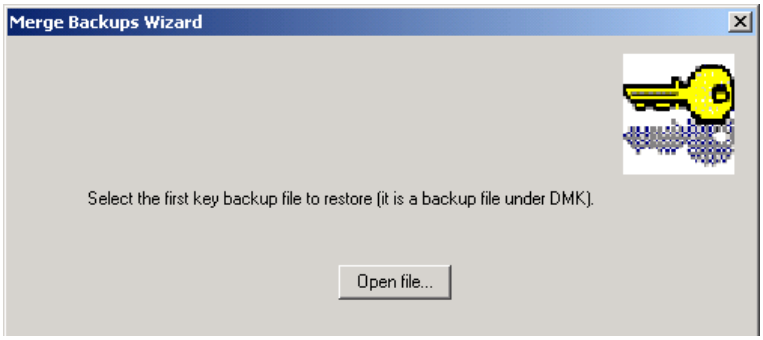
If the DMK is not entered, the following warning box appears prompting you to do so:

The next step consists in loading the capability CAP_STD_SAVE_KEYS.

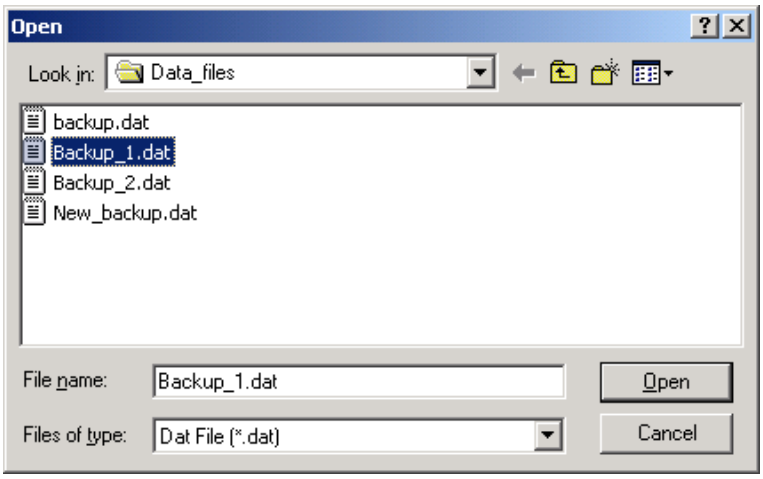



As long as the capability has not been entered, you cannot go on to the next step.
The following warning box will appear, prompting you to enter the capability.

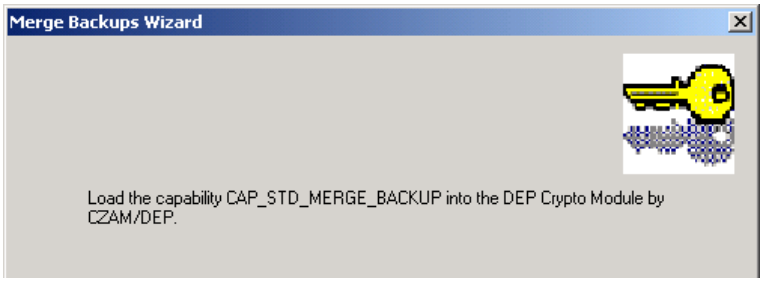
After that, you have to supply the name of the first backup file that you want to use.



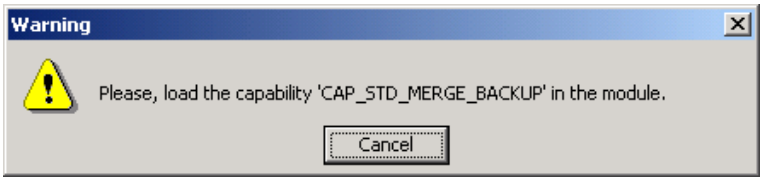
When you press the **Open file** button, the **Open** dialog box will appear where you have to select the appropriate file.



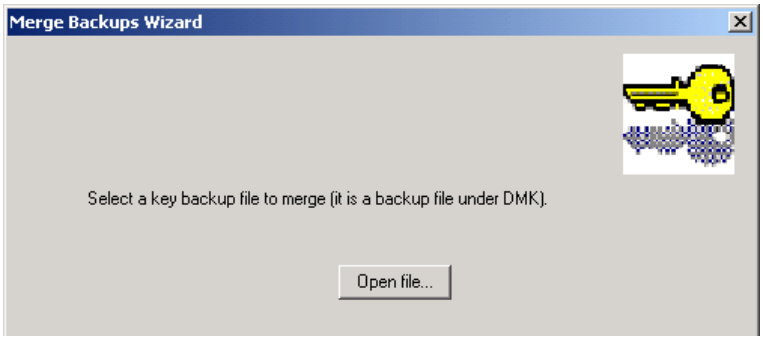

When the file has been restored, you are prompted to load the CAP_STD_MERGE_BACKUP capability.

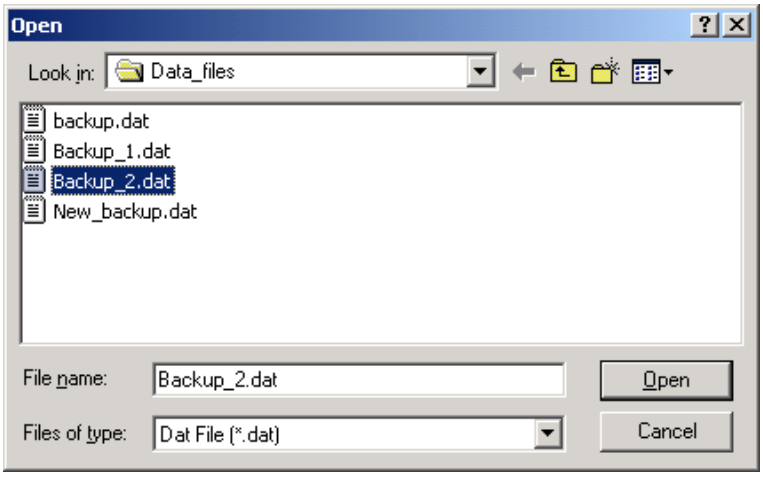



If it is not entered, a warning box appears prompting you to do so.

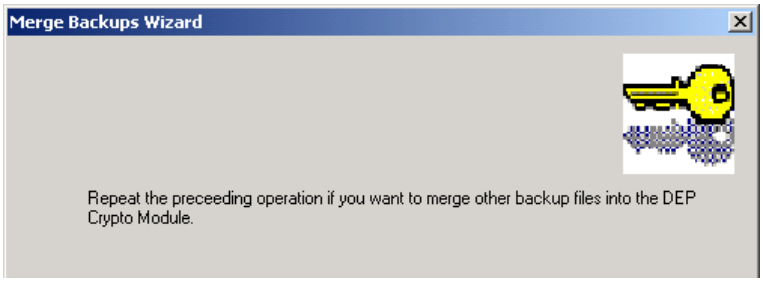



After that, the wizard asks the name of the second backup file.



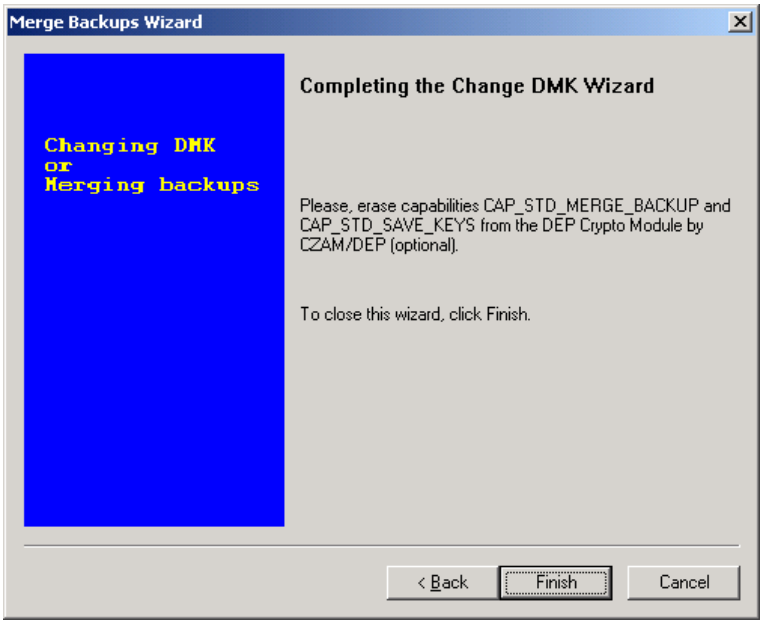



If you want to merge additional backup files, you need to repeat this step for each file that you want to merge.


Merge Backups Wizard
Repeat the preceeding operation if you want to merge other backup files into the DEP Crypto Module.

Finally, the wizard prompts you to erase the capabilities that you used to carry out the merge.

Click **Finish** to close the wizard.



## 8.5. READING DEP INFORMATION

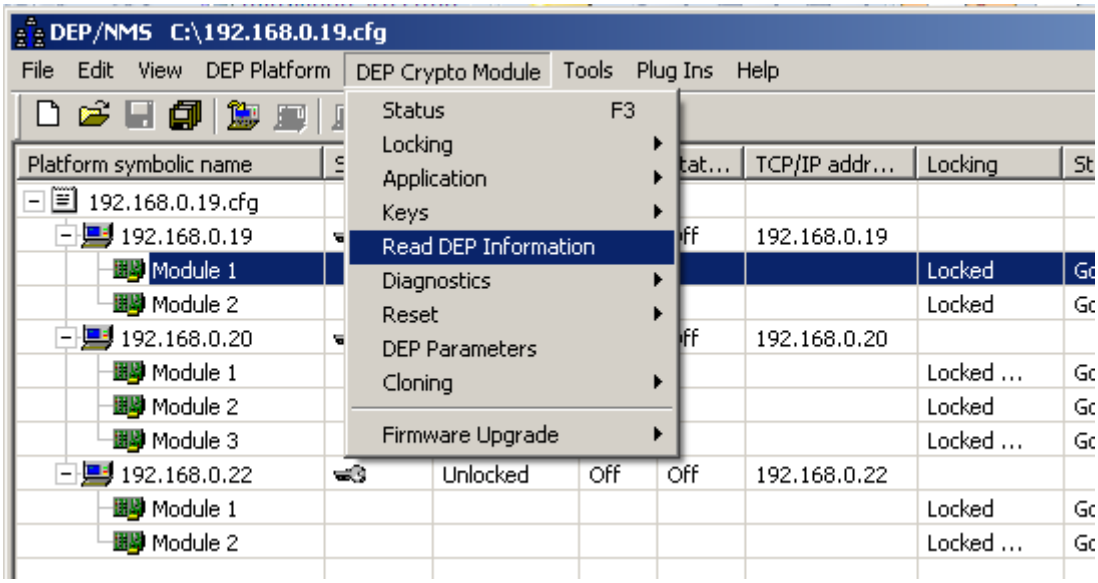
The **Read DEP Information** function retrieves the information about the following items:

- the *keys* loaded
  It gives a list of the known and loaded key identifiers, together with the indicator whether they are active or not. Additional information about the number of times the keys are loaded is also available;
- the *capabilities* loaded
  Together with their type and value. Additional information about the number of times the capabilities are loaded is also available;
- the **counters** related to:
  - the number of times **certain functions were executed** by the DEP Crypto Module
  - the number of times a **certain error occurs**
  - the number of times **some dedicated operations have been executed**
- the *DEP parameters* loaded.

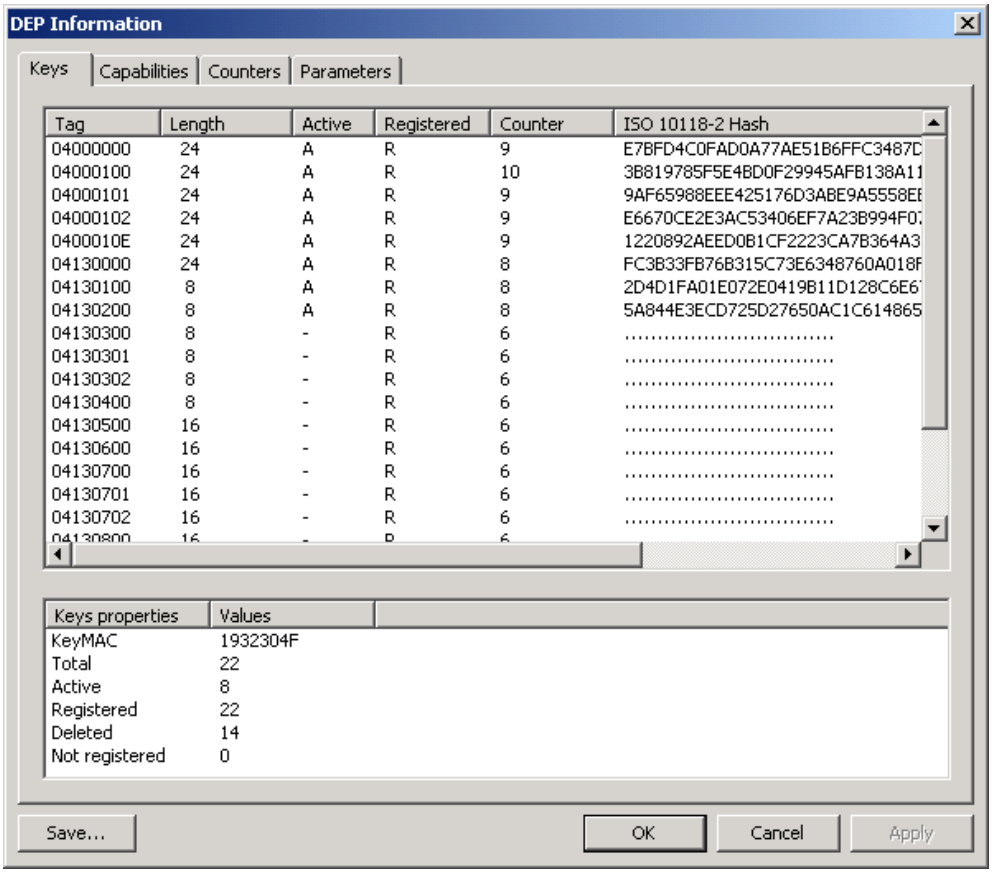
***Warning:***

The **Read DEP Information** item is *only* enabled in *locked* mode.

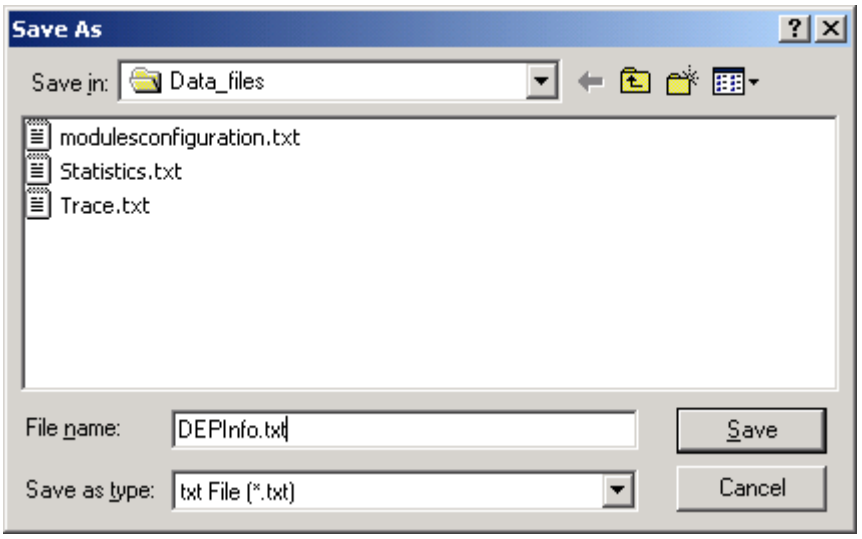
You can select the function from the **DEP Crypto Module** menu or from the context menu that appears when you right-click a specific DEP Crypto Module from the configuration tree.




The **DEP Information** dialog box appears with the information about the above-mentioned items organised on four tab sheets.




To store the information in the file click on the **Save...** button.. In the **Save As** dialog box supply the name of the file.



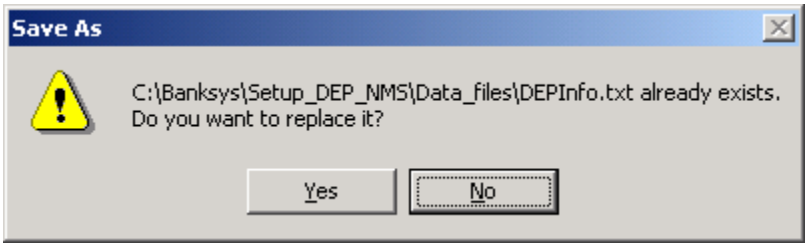

The default location of the file is "`C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM\Data_files`" for Windows 2000 and XP, and "`C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM\Data_files`" for Windows Vista and Windows 7.

The file name that is presented by default is:

- `DEPinfo.txt` if you save this information for the first time;

- the name of the last used file if you have save information before.

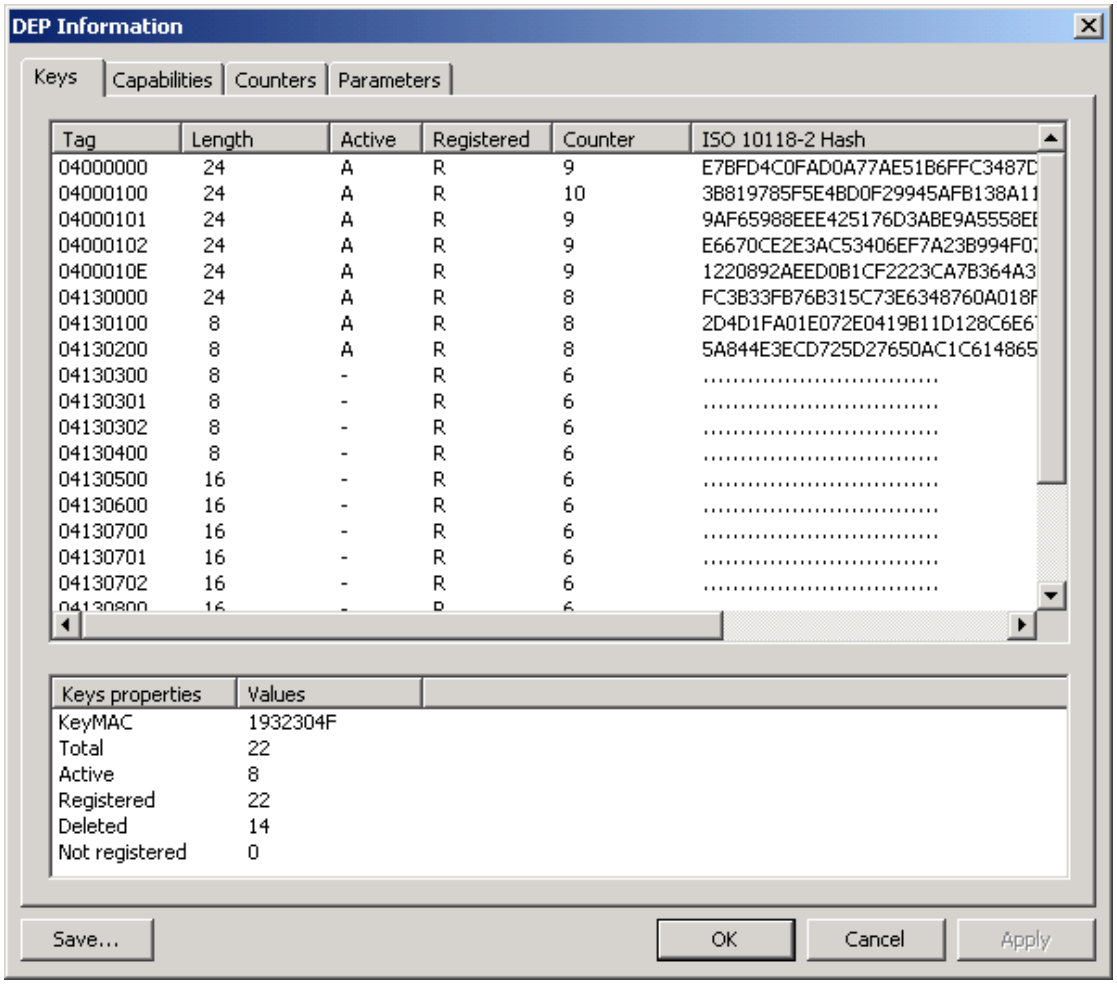
If the filename already exists, the DEP/NMS prompts for confirmation to overwrite it.




### 8.5.1. Understanding information about keys

The top part of the **Keys** tab sheet list the following information for every key that has ever been loaded into the DEP Crypto Module, even when it was deleted afterwards:

| Feature | Meaning |
|---|---|
| **Tag** | Identifies the key |
| **Length** | Defines the length of the loaded key in bytes |
| **Active** | Indicates whether the key is active (A) or has been deleted (-) |
| **Registered** | Indicates whether the key is known (R) by the loaded application or not (-) |
| **Counter** | Indicates how many times the key was loaded |
| **Iso 10118-2 Hash** | Gives the Iso 10118 hash value on the key |
| **CV (NORM)** | Gives a check value of type `norm` on the corresponding key, for symetrical keys known by the DEP Application Software, else the field is filled in with - |

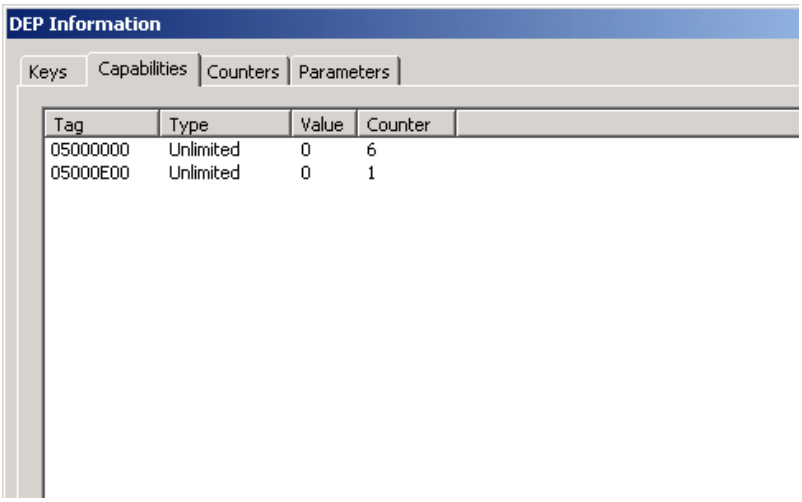



The bottom part of the tab sheet provides *global key* information:

| Feature | Meaning |
|---|---|
| **KeyMac** | Gives the keymacs on all the keys |
| **Total** | Defines the total number of keys there are available in the list whether active or not, registered or not |
| **Active** | Gives the total number of active loaded keys |
| **Registered** | Gives the number of keys known by the application |
| **Deleted** | Indicates how many keys there were deleted |
| **Not registered** | Gives the number of keys not known by the application |

### 8.5.2. Capabilities

The **Capabilities** tab sheet lists the following information about the different capabilities loaded into the DEP Crypto Module:

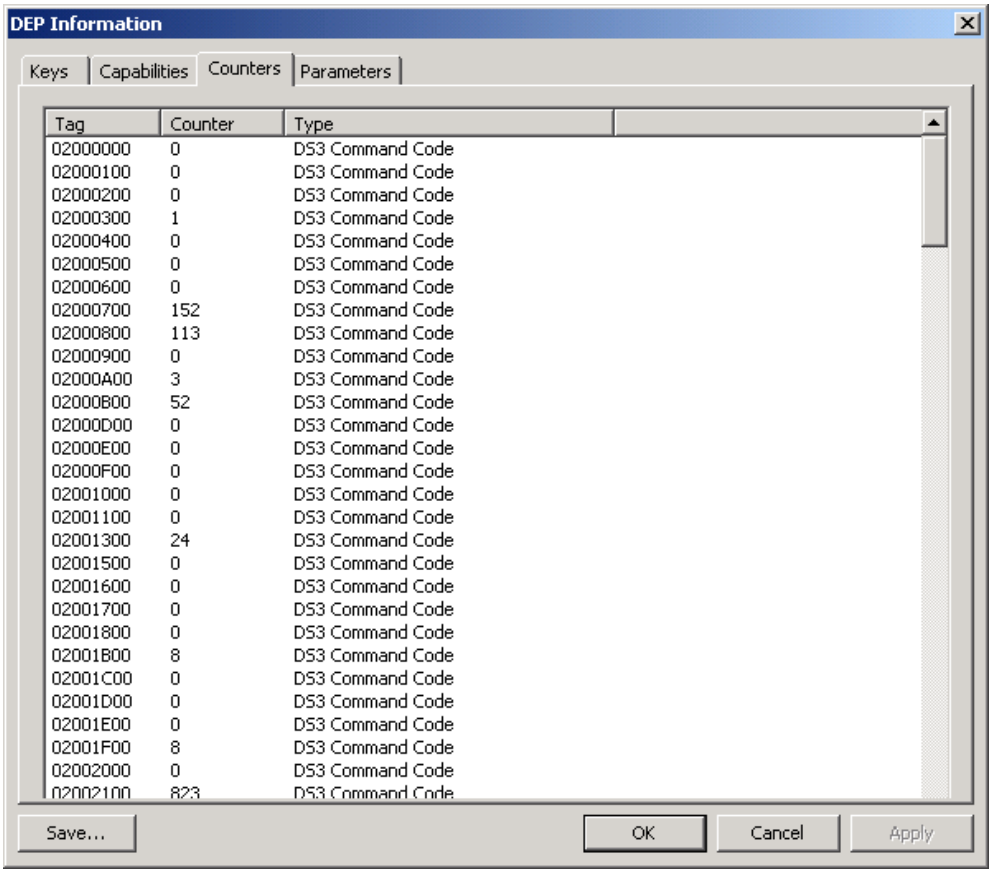



| Feature | Meaning |
|---|---|
| **Tag** | Identifies the tag of the capability |
| **Type** | Defines the type of limitation that applies to the capability:<br>– `Unlimited`<br>– `Counter Limited`<br>– `Time Limited` |
| **Value** | Indicates the remaining availability of the capability. the value can ether define:<br>– the *number of times* the capability can still be used in case of a counter limited type<br>– the *number of minutes* the capability can still be used in case of a counter limited type |
| **Counter** | Defines the number of times the capability has been loaded into the DEP Crypto Module |

### 8.5.3. Counters

The **Counters** tab sheet lists the following information for every available counter in the DEP Crypto Module:

| Feature | Meaning |
|---|---|
| **Tag** | Identifies the tag of the counter |
| **Counter** | Indicates the number of times the function was executed, the error was generated or the dedicated counter operation was executed |
| **Type** | Identifies the counter: *function* counter, *error* counter or *dedicated* counter; counters are grouped according to their type. |

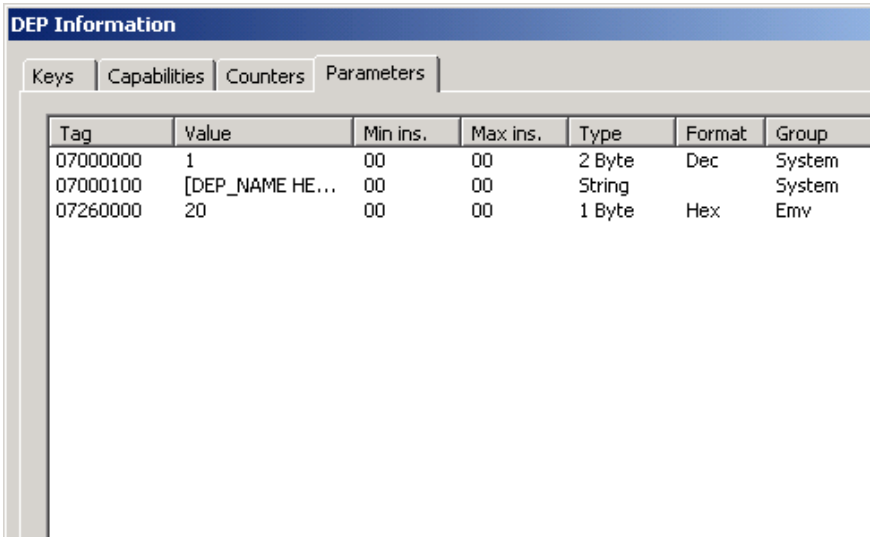



### 8.5.4. Parameters

The **Parameters** tab sheet lists the following information for every available DEP parameters in the DEP Crypto Module:

| Feature | Meaning |
|---|---|
| **Tag** | Gives the tag of the DEP parameter |
| **Value** | Gives the actual value of the DEP parameter |
| **Min ins**<br><br>**Max ins** | These parameters respectively define the lower and upper borders of the DEP Parameter instances; new DEP parameter instances outside these borders are not allowed. |
| **Type** | Identifies the type of the DEP parameter:<br>– 1 byte<br>– WORD-2bytes<br>– DWORD-4bytes<br>– digit<br>– string |
| **Format** | This identifies the required format of the DEP parameter during the introduction of the value:<br>– NONE<br>– DEC<br>– HEX |
| **Group** | Indiciates the group of parameters to which the |

| | |
|---|---|
| | actual parameter belongs |
| **Name** | Gives the textual description of the current DEP parameter |
| **Unit** | Gives additional information on the DEP parameter: for example `Key per slice`, … |
| **MinVL**<br><br>**Max VL** | These parameters define respectively the lower and upper borders of the DEP Parameter *value* (V) or *length* (L), whichever applies for the DEP Parameter. DEP parameter values/lengths outside these borders are not allowed. |



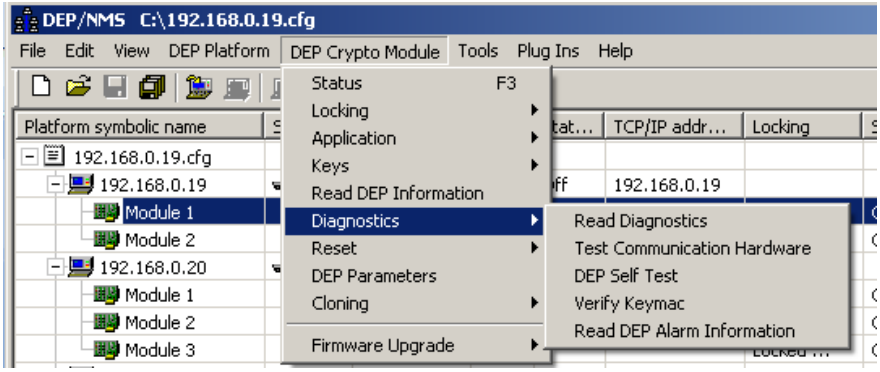

## 8.6. PERFORMING DIAGNOSTICS

The function **Diagnostics** allows you to test some internal devices of the DEP Platform and to read the alarm information.

***Warning:***

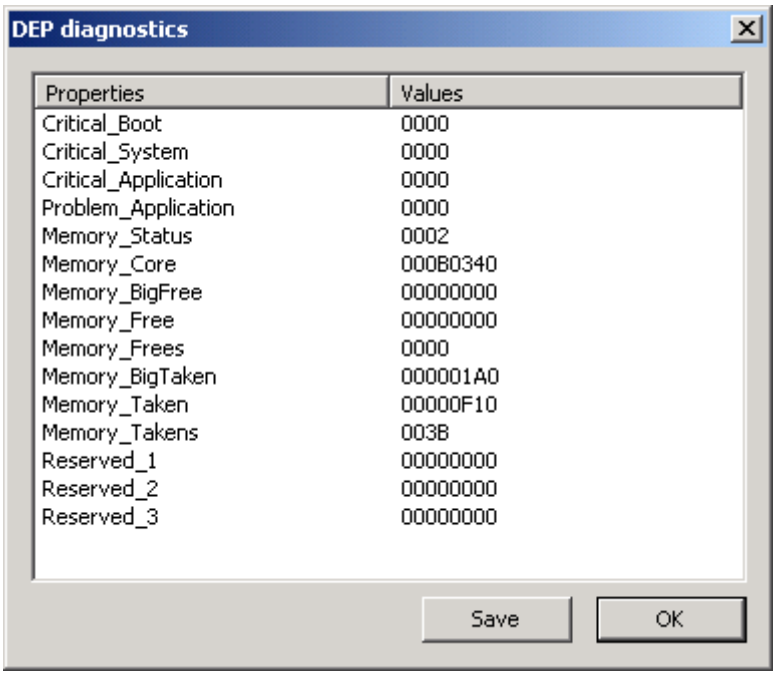
**Diagnostics** item is *only* enabled in *locked* mode.

When you select this function, a submenu appears with functions that give access to several tests.



### 8.6.1. Reading Diagnostics

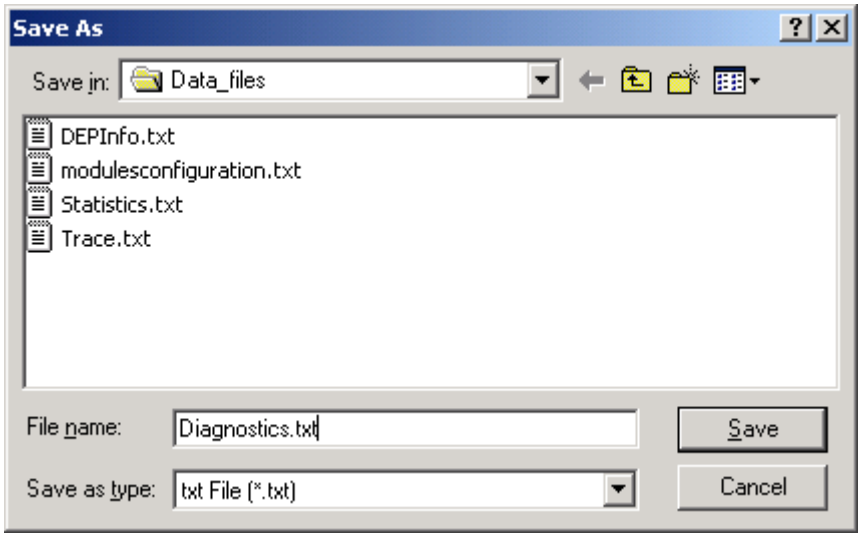
The function **Read Diagnostics** gives information on the memory status of the DEP Crypto Module.




The table below give an overview of the various features displayed in the **DEP diagnostics** window with their meaning.

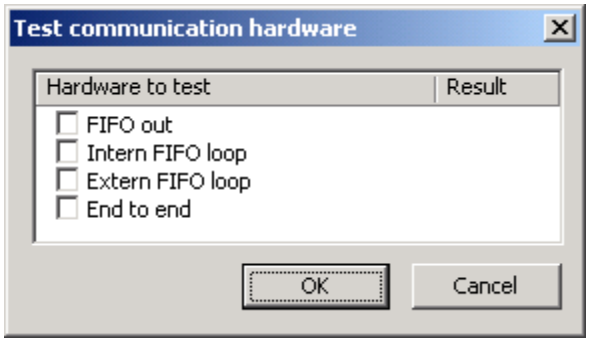
| Feature | Meaning |
|---|---|
| `Critical_Boot` | Error handling of boot part, reset at start only |
| `Critical_System` | Error handling in system part, reset after successful application load |
| `Critical_Application` | Error handling in application part, reset after successful application load |
| `Problem_Application` | Error handling in application part, reset after successful application load |
| `Memory_Status` | Status of the memory as in Borland's <alloc.h> |
| `Memory_Core` | Memory never used yet (in bytes) |
| `Memory_BigFree` | Size of biggest free block (1 block = 16 bytes) |
| `Memory_Free` | Remaining amount freed blocks |
| `Memory_Frees` | Number of freed blocks |
| `Memory_Bigtaken` | Size of biggest currently allocated blocks |
| `Memory_Taken` | Remaining number of allocated blocks |
| `Memory_Takens` | Number of currently allocated blocks |
| `Reserved_1` | Still reserved |
| `Reserved_2` | Still reserved |
| `Reserved_3` | Still reserved |

The **Save** button at the bottom of the **DEP diagnostics** window allows you to store the information in a file. In the **Save As** dialog box you have to specify the name of the file that you want to use.

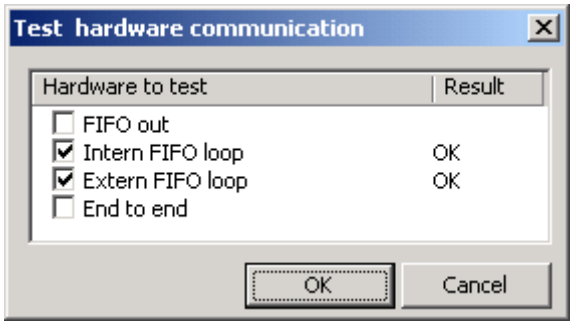



## 8.6.2. Testing Communication Hardware

The **Test Communication Hardware** function tests the PCI interface of the DEP Platform. The **Test communication hardware** dialog box will appear where you have to select kind of test(s) that you want to execute:



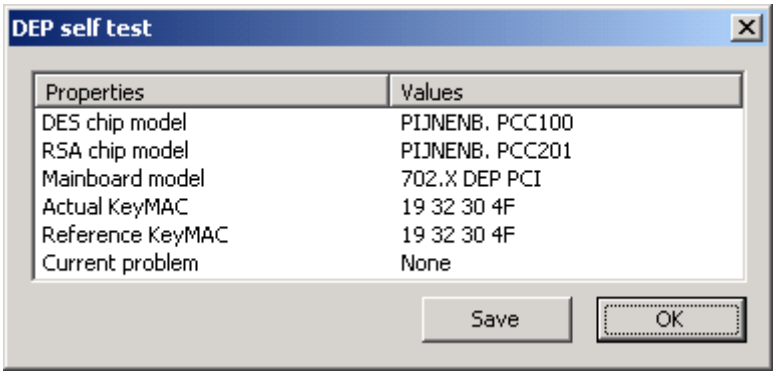

Feedback about the results of chosen tests are shown in the same dialog box.

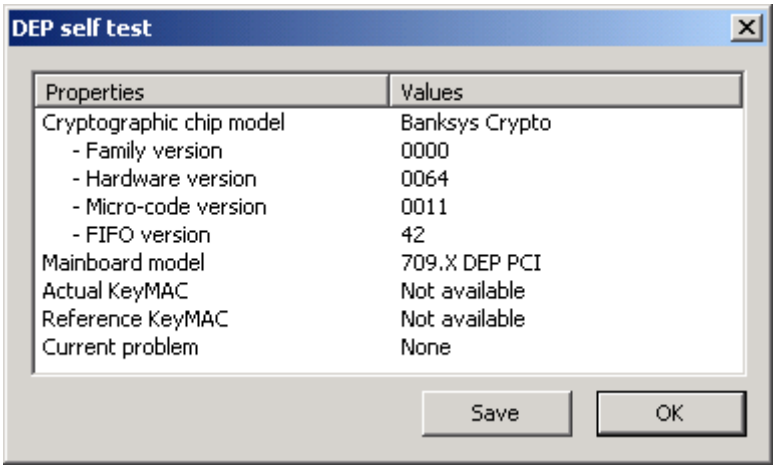


### 8.6.3. Performing DEP Self-Test

With the function **DEP Self-Test** you can test the main board of the DEP Crypto Module and displays some information. Depending on the hardware installed, the test checks the DES and the RSA units or the unique cryptographic chip. When application software is loaded, a check value over the cryptographic keys (Keymac) is also verified.

When you select this function, one of the two dialog boxes appears with the following information:

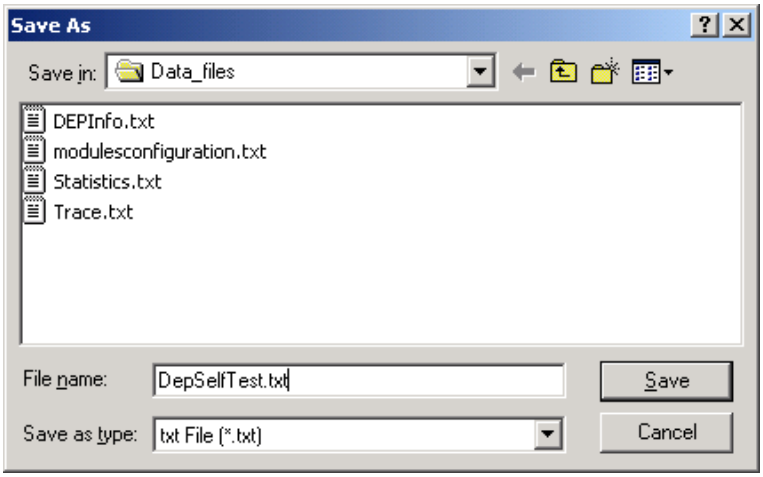



| Feature | Meaning |
|---|---|
| **DES Chip mode** | Indicates the type of the DES chip available |
| **RSA Chip model** | Gives the type of the RSA chip available |
| **Cryptographic chip model** | Gives the type of the cryptographic chip and all the version information:<br>– **family**<br>– **hardware**<br>– **micro-code**<br>– **FIFO** |
| **Main Board model** | Indicates the release of the main board |
| **Actual KeyMAC** | Represents the current cryptographic check value |

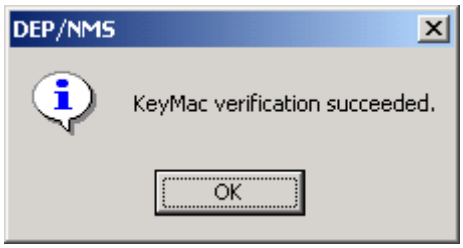
| | |
|---|---|
| **Reference KeyMAC** | Is calculated automatically after a key has been loaded |
| **Current Problems** | Gives a text description of the current problem, if any |

The **Save** button allows you to store the information in a file. In the **Save As** dialog box, you have to specify the name of the file.




### 8.6.4. Verifying the Keymac

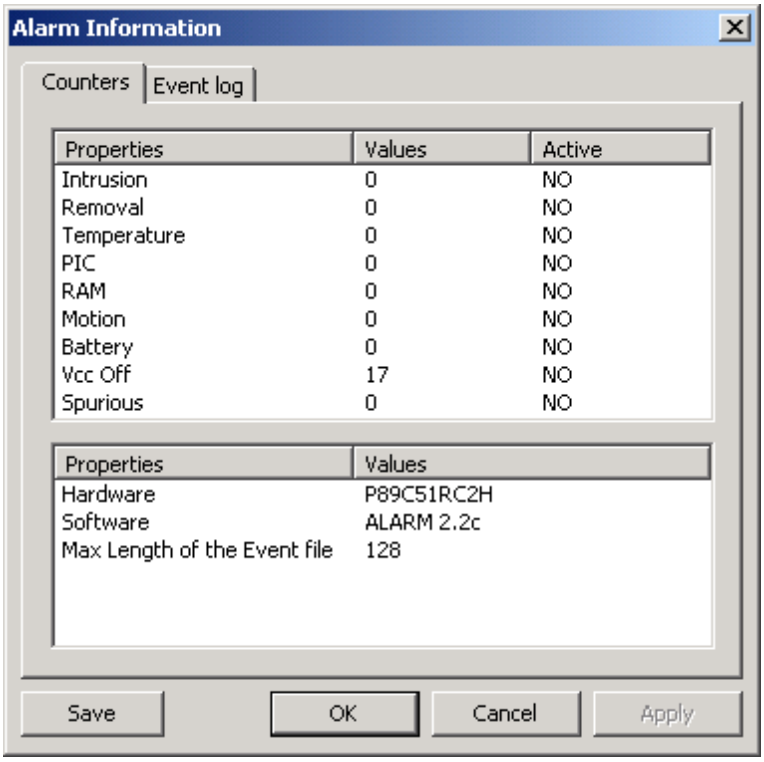
The function **Verify Keymac** allows you to verify the Keymac of the DEP Crypto Module. The Keymac is evaluated and compared with the **Reference Keymac**. An information box reports the result of the verification.




### 8.6.5. Reading DEP Alarm Information

The function **Read DEP Alarm Information** from the **Diagnostics** submenu reports the status of the alarm processor and the logging information related to it.

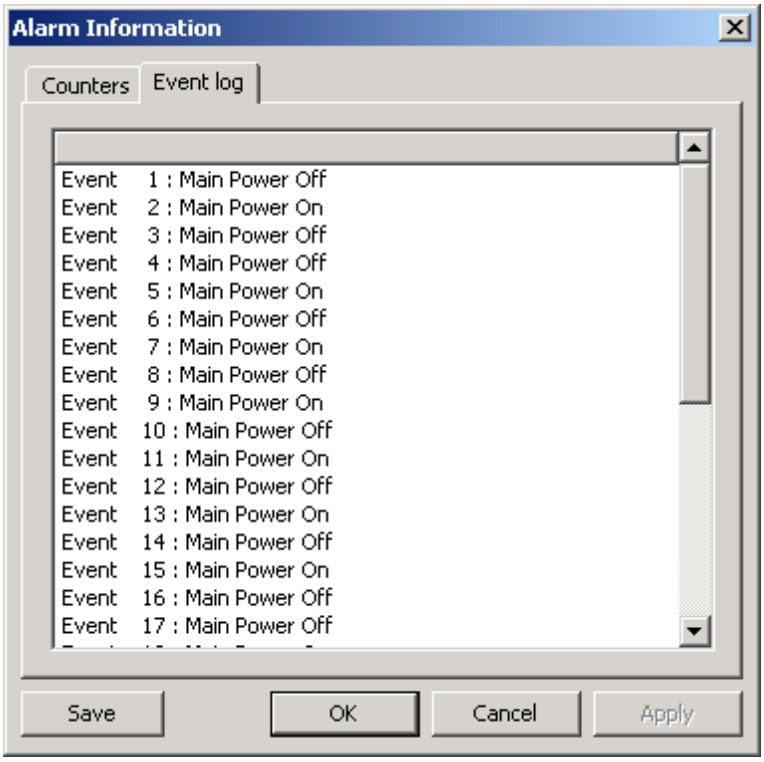
When you have selected this function, the **Alarm Information** dialog box appears.



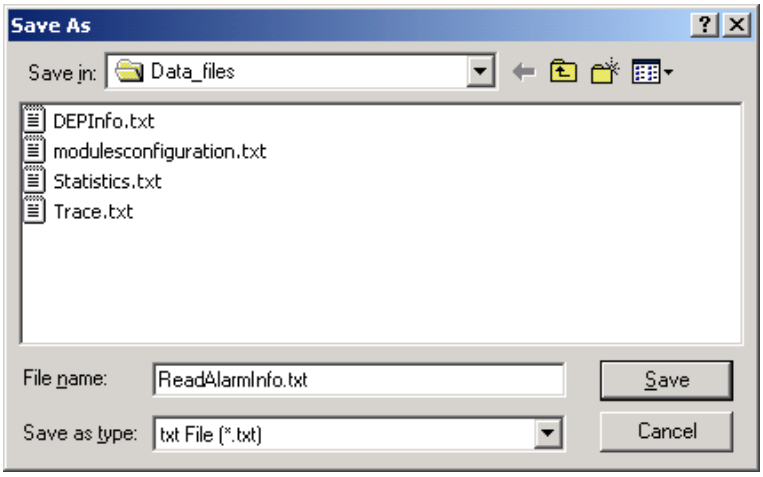

The **Counters** tab sheet consists of two parts:

- a list of possible alarms in the top part of the sheet
  It presents the name of the alarm, the number of times the alarm was detected by the alarm processor and the type of alarm that was actually detected.
- general information about the alarm board in the bottom part of the sheet:
  - **Hardware:** gives the identification and version of the hardware alarm board,
  - **Software**: gives the name and the release version of the alarm software
  - **Max Length of the event file**: gives the maximum length of the event log list

The **Event Log** tab sheet contains a sequential overview of the alarm events that have been detected with the type of alarm; all events are listed sequentially.


Alarm Information
Counters
Event log
Event 1 : Main Power Off
Event 2 : Main Power On
Event 3 : Main Power Off
Event 4 : Main Power Off
Event 5 : Main Power On
Event 6 : Main Power Off
Event 7 : Main Power On
Event 8 : Main Power Off
Event 9 : Main Power On
Event 10 : Main Power Off
Event 11 : Main Power On
Event 12 : Main Power Off
Event 13 : Main Power On
Event 14 : Main Power Off
Event 15 : Main Power On
Event 16 : Main Power Off
Event 17 : Main Power Off
Save
OK
Cancel
Apply

The **Save** button allows you to store the information in a file. In the **Save As** dialog box, you have to supply the name of the file.

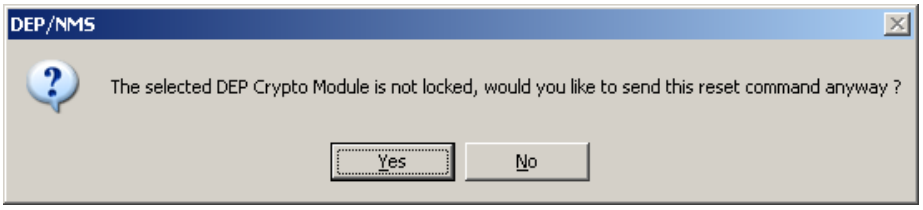



## 8.7. RESETTING THE DEP PLATFORM OR ITS COMPONENTS

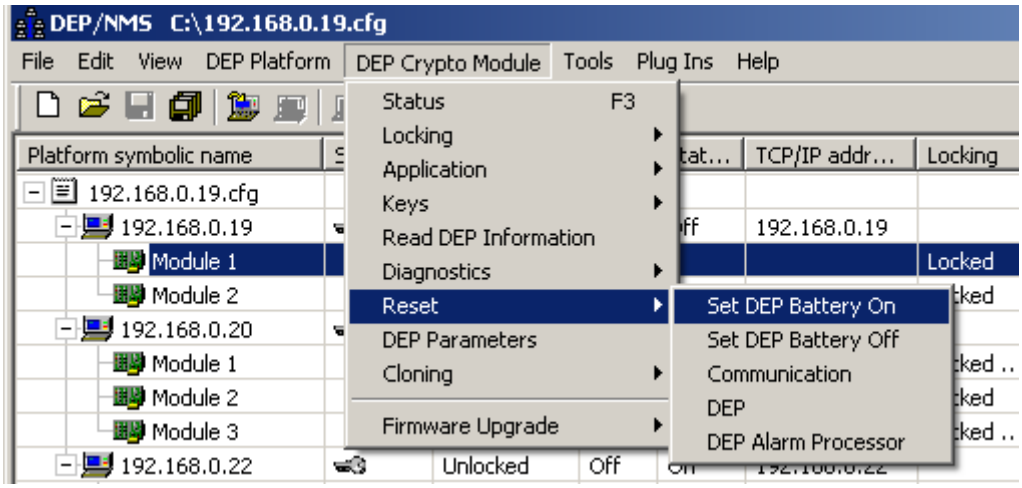
You can use the functions in the **Reset** submenu to reset different components of the DEP Platform system.
The functions in the **Reset** submenu are ranked by increasing order of impact on the hardware of the DEP Platform.

***Warning:***

When the DEP Crypto Module is not in *locked* mode, the following information message box will appear.



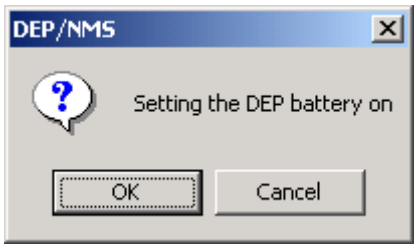

When selecting this item, a submenu will appear with the several functions:



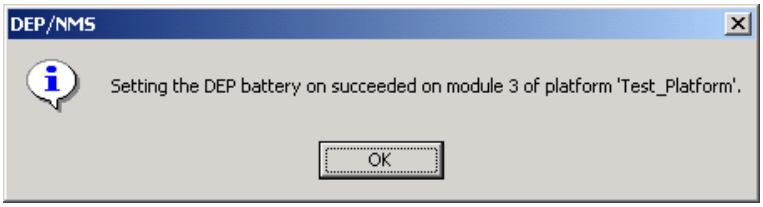

## 8.7.1. Managing the backup battery

### 8.7.1.1. Setting the DEP Battery On

The **Set DEP Battery On** function connects the backup battery in the DEP Crypto Module. When the battery is connected, the DEP Crypto Module can retain memory contents when the main power is turned off. Before the battery is actually set on, you are prompted for confirmation.

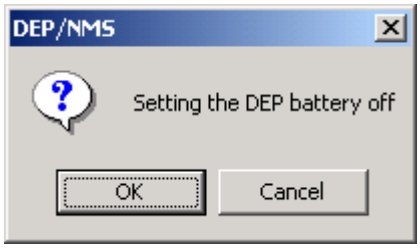



After confirmation, the operation is executed. A confirmation message is displayed if the reset of the DEP Crypto Module has succeeded:

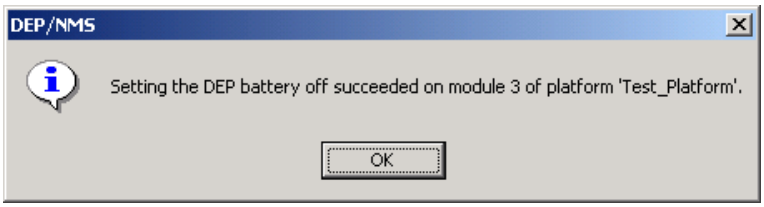


#### 8.7.1.2. Setting the DEP Battery Off

The **Set DEP Battery Off** function disconnects the backup battery in the DEP Crypto Module. With the battery disconnected, the DEP Crypto Module relies on the mains supply to maintain memory contents. This implies that keys and application are lost if the current is cut.
Before actually setting the battery off, you are prompted for confirmation.



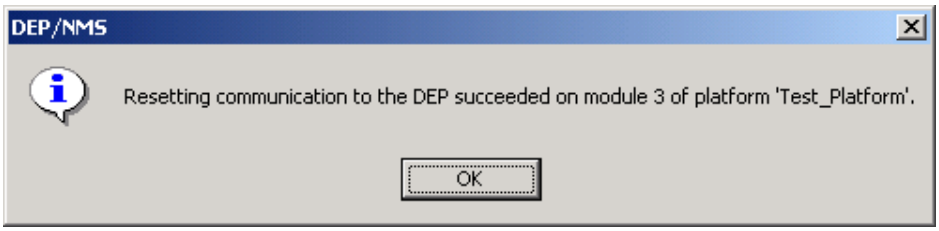

After confirmation, the operation is executed. A confirmation message box is displayed if the reset of the DEP Crypto Module has succeeded.




### 8.7.2. Resetting Communication to the DEP platform

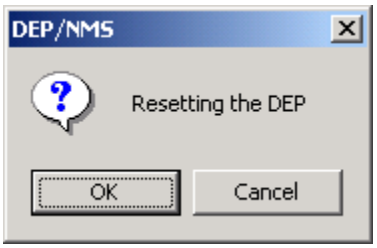
The **Communication** function clears the message buffers on the PCI interface of the DEP Platform. Before resetting, DEP/NMS prompts you for confirmation.

After confirmation, the reset operation is executed. A confirmation message is displayed if the reset of the DEP Crypto Module has succeeded.

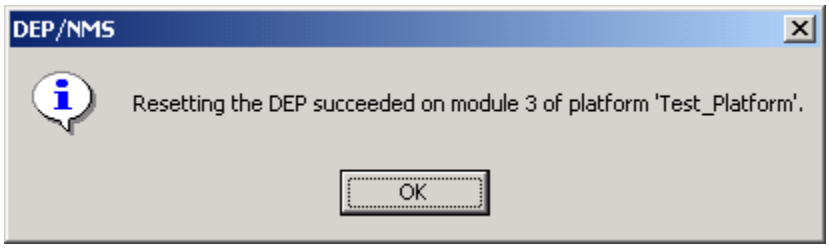


### 8.7.3. Resetting the DEP Crypto Module CPU

The function DEP resets the main CPU. All the data in the memory is kept: application software, keys, etc...
Before resetting the DEP/NMS prompts you for confirmation.




After confirmation, the reset operation is executed.
A message box will appear if the reset of the DEP Crypto Module has succeeded:

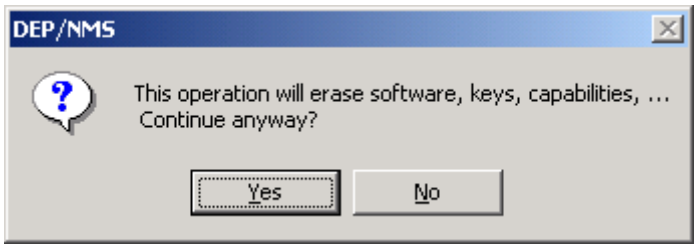



### 8.7.4. Resetting the DEP Alarm Processor

The **DEP Alarm Processor** function causes both the main CPU and the alarm processor to be reset. Before resetting a confirmation is asked to the operator.

***Warning:***

Be aware that all the memory (application software, keys, ...) will be cleared by this operation.




After confirmation, the reset operation is executed.
If the reset of the DEP Alarm Processor has succeeded, the main window is automatically refreshed.

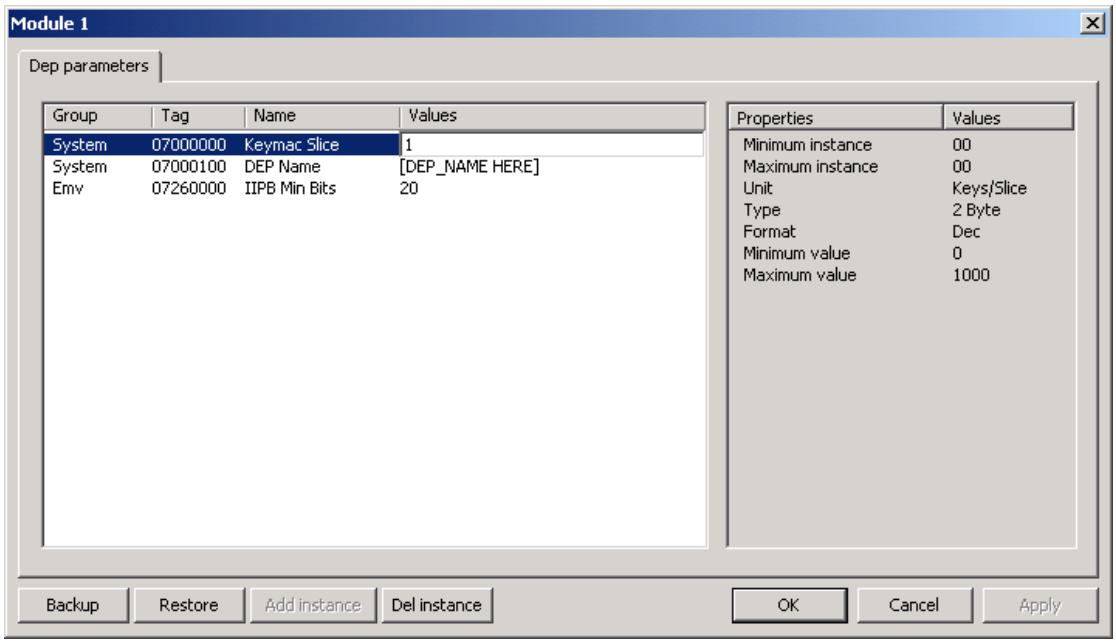
## 8.8. MANAGING DEP PARAMETERS

You can use parameters to fine-tune application software. The **DEP Parameters** functions lets you set, modify, backup/restore, … DEP parameters of the DEP Crypto Module.

***Warning:***

The **DEP Parameters** function is *only* enabled in *locked* mode.

When you select the **DEP Parameters** function from the DEP Crypto Module menu or from the context menu that appears when you right click a DEP Crypto Module in the configuration tree, a dialog box appears with the name of the selected module in the title bar.




***Note:***

The **DEP parameters** list always contains all the known DEP parameters by the DEP Crypto Module. However, DEP parameters are only physically available (and used) in the DEP Crypto Module if they have a value (**Value** field contains a value).

The table below gives an overview of the DEP parameters.

| Parameter | Meaning |
|---|---|
| **Group** | Indicates the group of parameters to which the current parameter belongs. |
| **Tag** | Gives the tag of the current parameter. |
| **Name** | Gives the textual description of the current DEP parameter. |
| **Values** | Gives the actual value of the DEP parameter.<br>***Note***:<br>If you modify the value and do not click **Apply** or **Ok**, the modified value *is not sent* to the DEP Crypto Module. |
| **Minimum instance**<br>**maximum instance** | These parameters respectively give the lower and upper borders of the DEP Parameter instances. New DEP Parameter instances outside these borders are not allowed. |
| **Unit** | Gives additional information on the DEP parameter (e.g. key per slice, …); these units depend on the DEP |

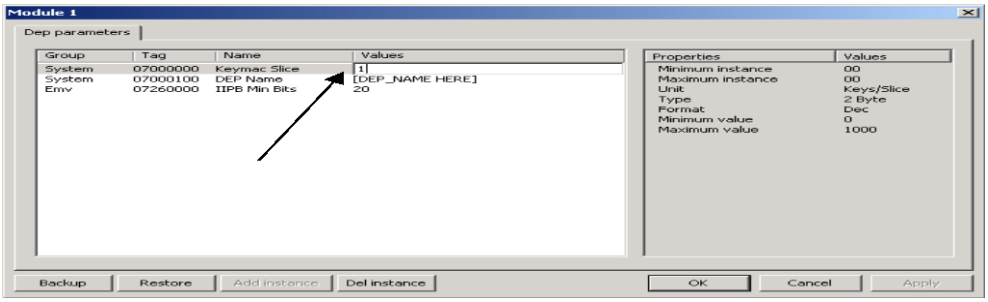
| | |
|---|---|
| | parameter and are defined in the application software. |
| **Type** | Identifies the type of the DEP parameter: |
| **1 byte** | Identifies a one-byte DEP parameter and should be entered as two characters in the **Value** field: `00-FF` or `00-99` depending on the format and the allowed value interval. |
| **WORD** | Identifies a two-byte DEP parameter and should be entered as four characters in the **Value** field: `0000-FFFF` or `0000-9999` depending on the format and the allowed value interval. |
| **DWORD** | Identifies a four-byte DEP parameter and should be entered as eight characters in the **Value** field: `00000000-FFFFFFFF` or `00000000-99999999` depending on the format HEX/DEC and the allowed value interval. |
| **digits** | Identifies a DEP parameter as an array with an even number of nibbles/(hexa)decimal digits: `0-F` or `0-9` depending on the format; the length of the array depends on the **VL-**/**VL+** property. |
| **string** | Identifies a DEP Parameter as a text (string of ASCII characters); the length of the text depends on the **VL-**/**VL+** property. |
| **Format** | Identifies the required format of the DEP parameter during introduction of the value. |
| **NONE** | The format is not applicable (for DEP parameters of type *string*). |
| **DEC** | The DEP Parameter should be entered as a decimal value (`0-9`). |
| **HEX** | DEP Parameter should be entered as a hexadecimal value (`0-F`). |

If you have performed an operation on any of the parameters (modify, add an instance,…), you can proceed in different ways, depending on the button that you press:

- **OK**: updates the parameter(s) and closes the window
- **Apply**: update the parameter(s) but does not close of the window
- **Cancel**: the parameters are not modified and the window closes

### 8.8.1. Modifying DEP parameters

If you want to select a DEP parameter, first you should select it and then modify the corresponding value.

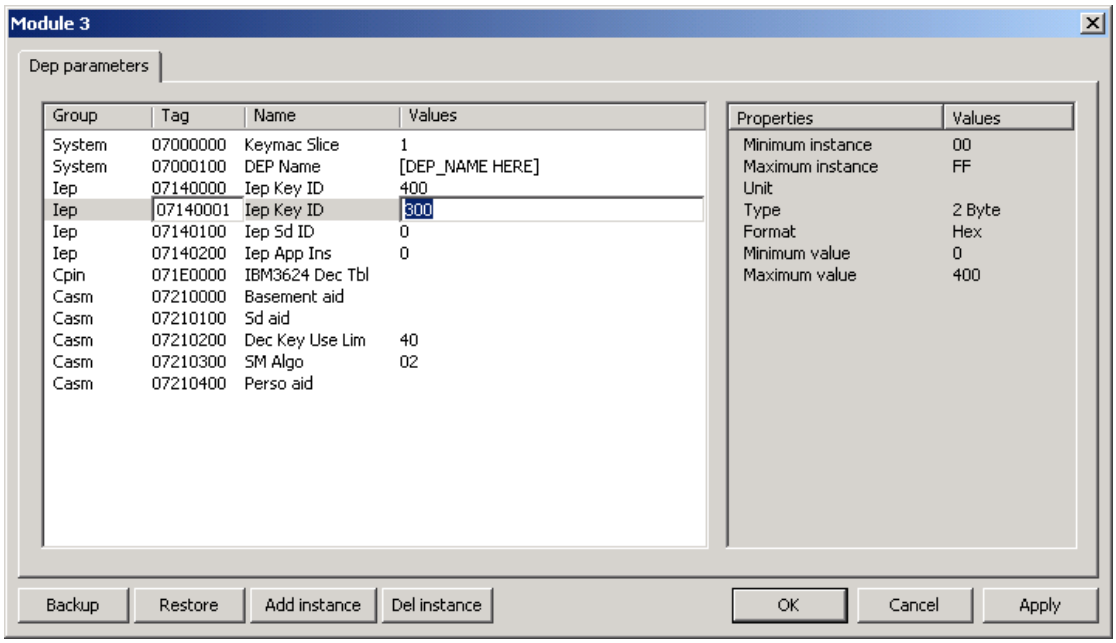



***Note:***

Only the field **Values** can be modified, other fields are read-only.

### 8.8.2. Adding a parameter instance

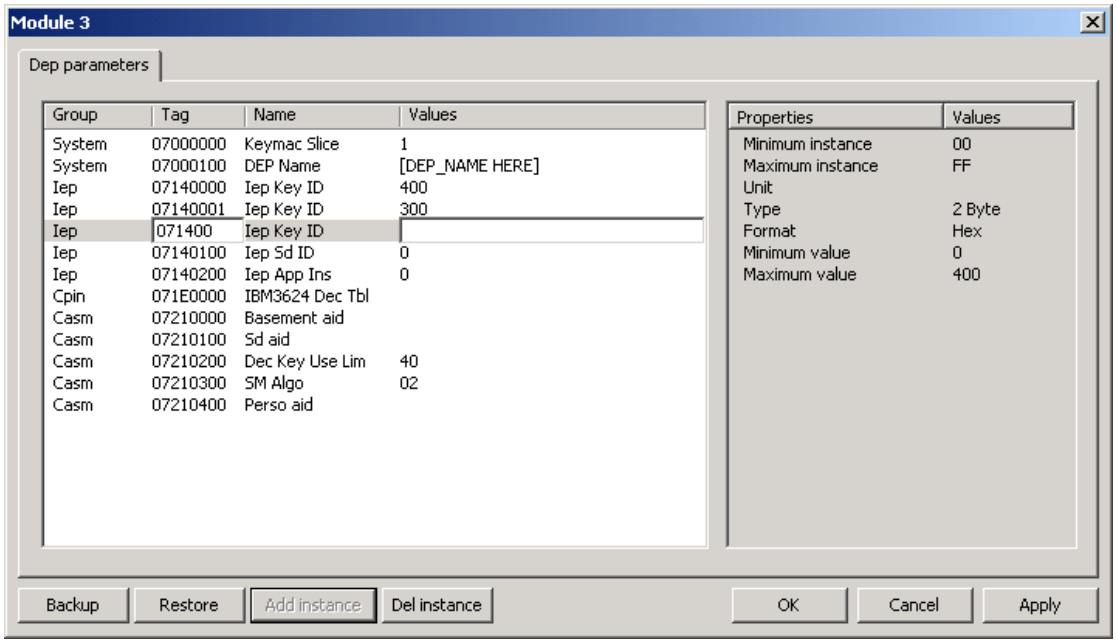
In order to add an instance to a DEP parameter, you have to select the multi-instance DEP parameter and click the **Add instance** button.




A new instance is generated, of which you can modify both instance and value.

***Note:***

These newly defined values are only sent to the DEP Crypto Module after you have pressed **OK** or **Apply**.



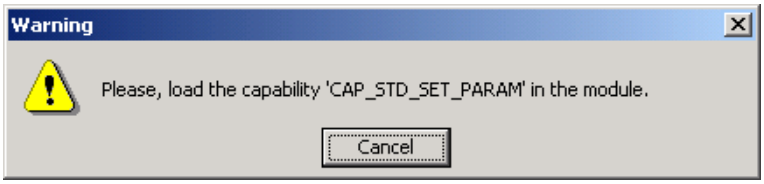

## 8.8.3. Deleting a parameter instance

You can use the button **Del instance** to either:

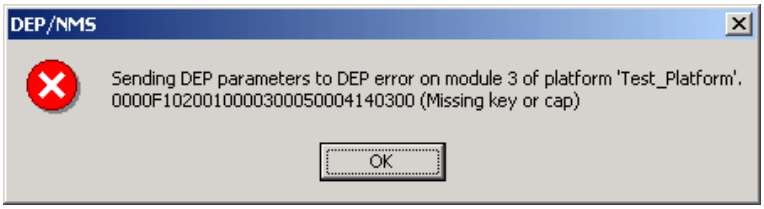
- delete an instance of a multi-instance parameter;
- erase the value of a mono-instance-parameter.

> ***Note:***
>
> In the latter case, the DEP will return the corresponding default value, if it exists.

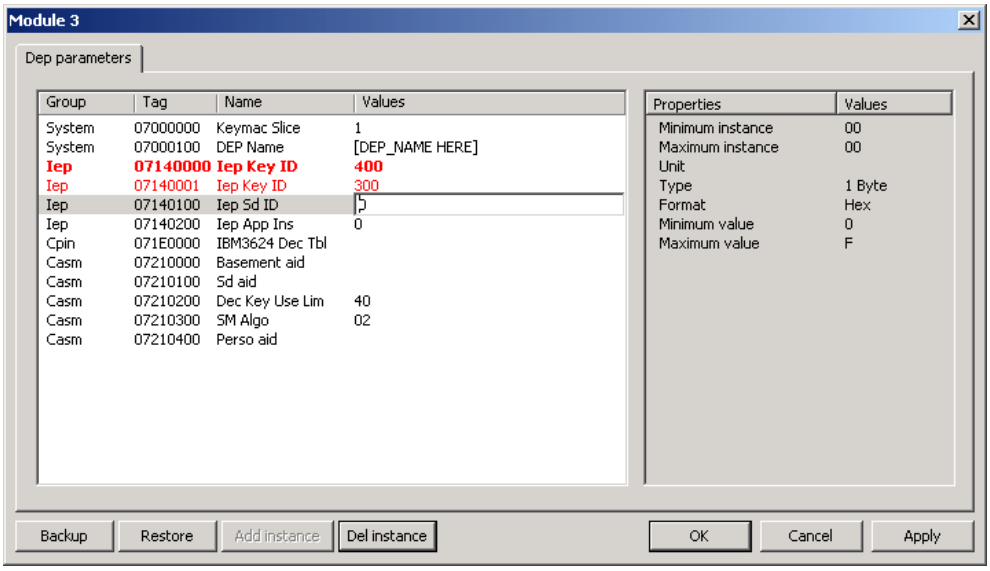
If you press **OK** or **Apply** without the capability `CAP_STD_SET_PARAM` being loaded, a warning box appears prompting you to load it.




If the operation fails, the following error box will appear:


DEP/NMS
Sending DEP parameters to DEP error on module 3 of platform 'Test_Platform'.
0000F102001000030005000414030O (Missing key or cap)
OK

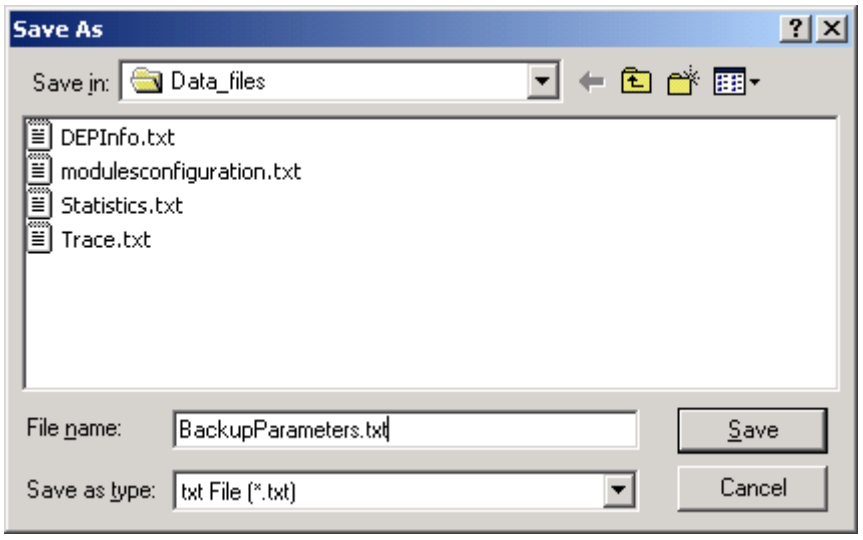
In addition to that, the first wrong parameter is displayed in red and bold; the following parameter that has not yet been sent to DEP are in red only:




### 8.8.4. Backing up parameters

The **Backup** button stores the parameter values available in the DEP Crypto Module into a backup file on the DEP/NMS.

When this function is executed, a **Save As** dialog box appears where you have to supply the name of the backup file.

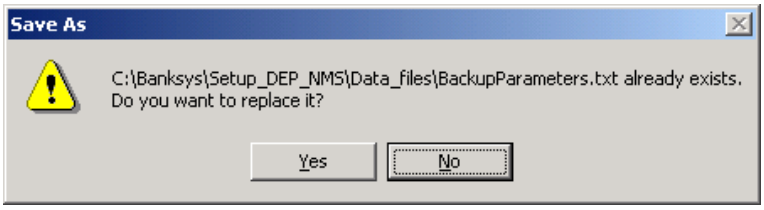



By default, the backup file is stored in the `Data_files` subfolder with path `"C:\Documents and Settings\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows 2000 and Windows XP, and `"C:\Users\[USER]\Atos Worldline\DEP_NMS and DEP_EM"` for Windows Vista and Windows 7 respectively.

The default file name that is presented is:

- `BackupParameters.txt` if you back up parameters for the first time;
- the name of the last used backup file the other times.

When the DEP parameter backup file already exists, DEP/NMS prompts you for confirmation to overwrite it.



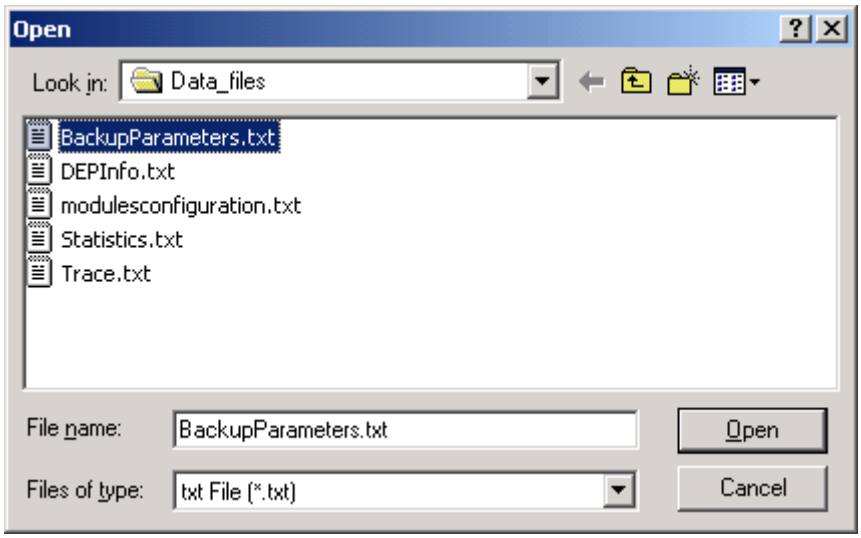

Every DEP parameter backup file is created as an ASCII text file, which you can view with any text editor. The DEP/NMS does not have any built-in feature for viewing these files.

### 8.8.5. Restoring parameters

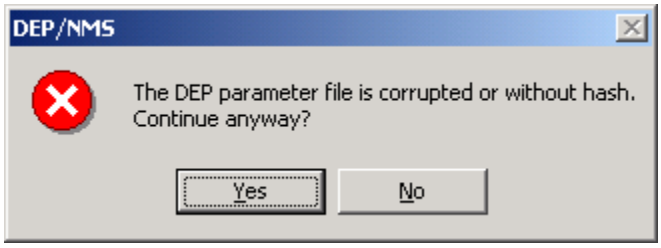
The **Restore** button is to restore the contents of a DEP parameter backup file to the DEP Crypto Module.
When you select this function, you are prompted to specify the name of the backup file from which you want to restore.

The default file name that is presented is:

- `backupparameters.txt` if you restore parameters for the first time
- the name of the last used backup file the other times.




The input file must be a valid DEP parameter backup file. DEP/NMS reads the file and verifies the Sha-1 hash at the end of the file and if the file is corrupted, an error messages is displayed:



***Note:***

You can restore older DEP parameter files without hash by pressing **Yes**.

The DEP parameters are sent to the DEP Crypto Module and the parameter window is refreshed.

# 9. DEP SOFTWARE CLONING

*Note:*
This functionality is protected by the license dongle for the platforms with LIVE mode. You can manage Cloning functionalities without license dongle for the platforms with TEST mode (max 5 platforms).

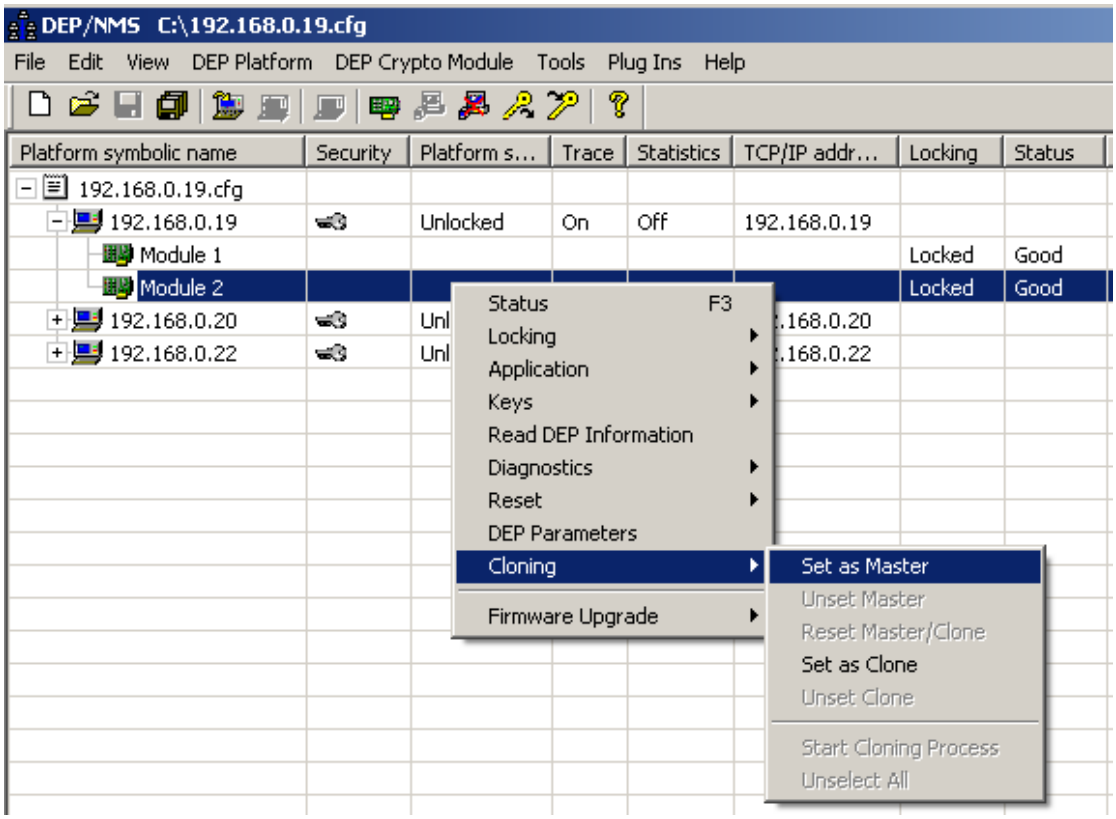
## 9.1. PREREQUISITES

- The minimum version of the DEP/NMS application must be 3.3.2.14;
- Only one Master DEP Crypto Module and at least one or more Clone candidate(s) should be selected;
- There should be no (other) cloning process started on any of participating DEP Crypto Modules
- All the DEP Crypto Modules involved in the cloning process must be locked. To lock the DEP Crypto Module, right-click on the appropriate DEP Crypto Module, select **Locking** and click **Lock** option;

For more information about the DEP Software Cloning prerequisites please refer to the *DEP Software Cloning Guide*.

## 9.2. SETTING AS MASTER

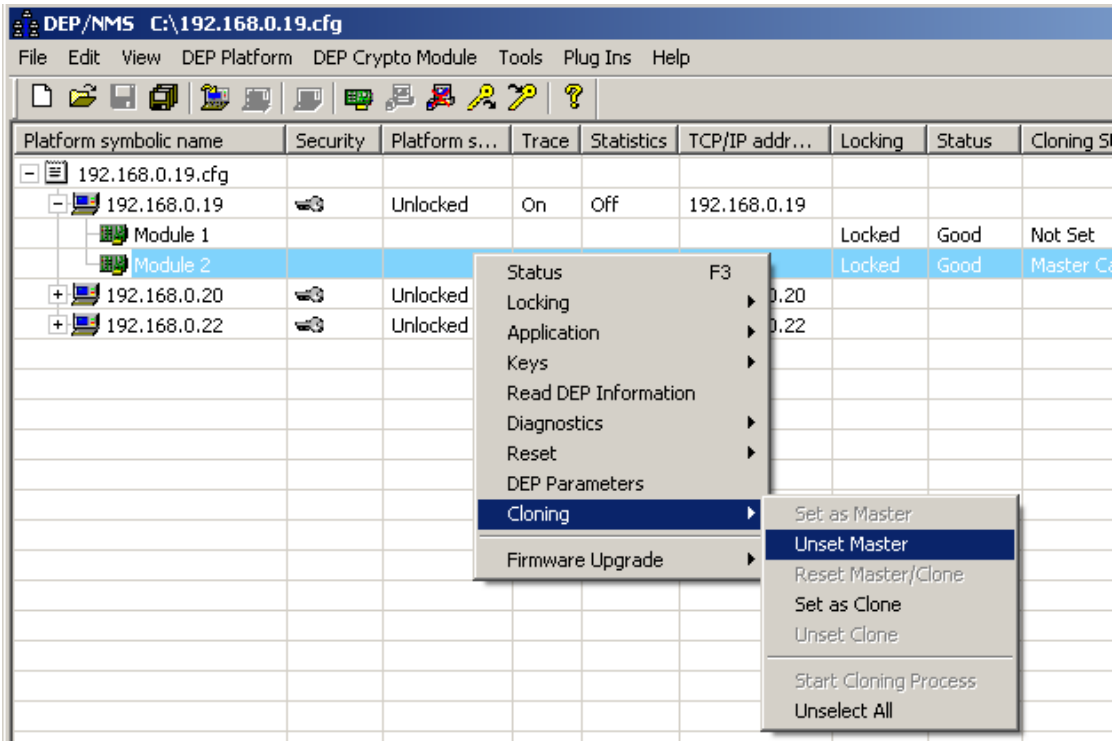
To set a DEP Crypto Module as Master for cloning, right-click on the appropriate DEP Crypto Module, choose ***Cloning*** and then click on the **Set as Master** option. Also you can set the DEP Crypto Module as Master from general menu. Select the DEP Crypto Module you want to set as Master, click on the **DEP Crypto Module** in main window, choose **Cloning** and click on the **Set as Master** option.




If Master is successfully selected the **Cloning Status** will become **Master Candidate** and the row to *light indigo*.

## 9.3. UNSET MASTER

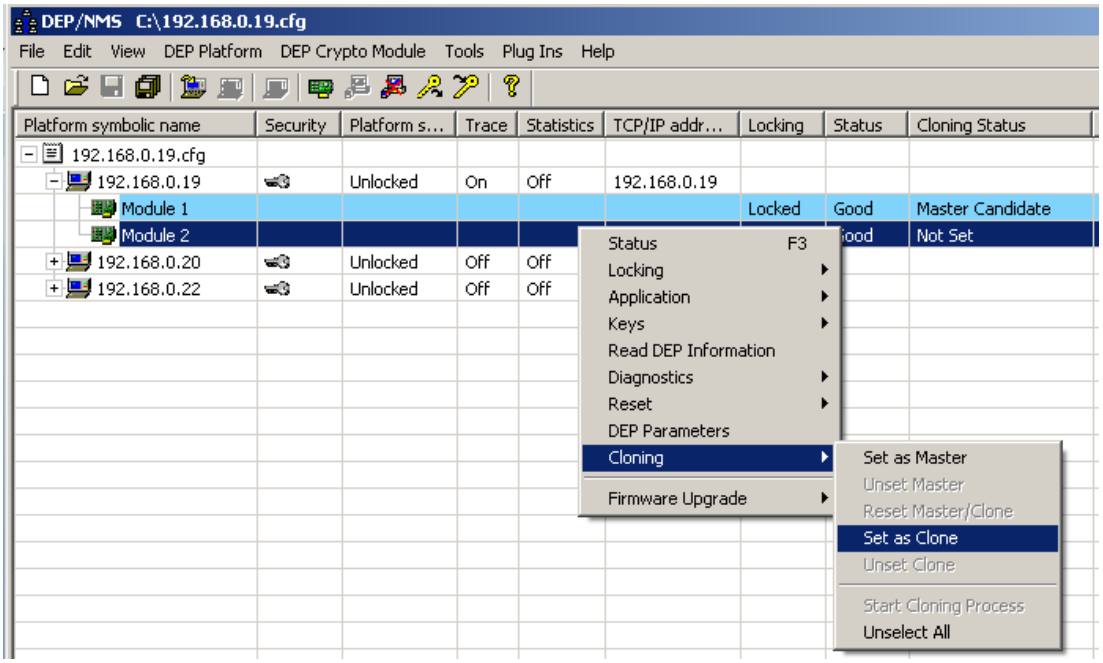
To unset the previously set as Master DEP Crypto Module, right-click on the DEP Crypto Module, choose **Cloning** and then click on the **Unset Master** option. Also you can unset the DEP Crypto Module Master candidate from general menu. Select the Master DEP Crypto Module, click on the **DEP Crypto Module** in main window, choose **Cloning** and click on the **Unset Master** option.




After the Master is unset, the **Cloning Status** will turn into *Not Set*. The background of the DEP Crypto Module line returns to the DEP Crypto Module line usual colour.

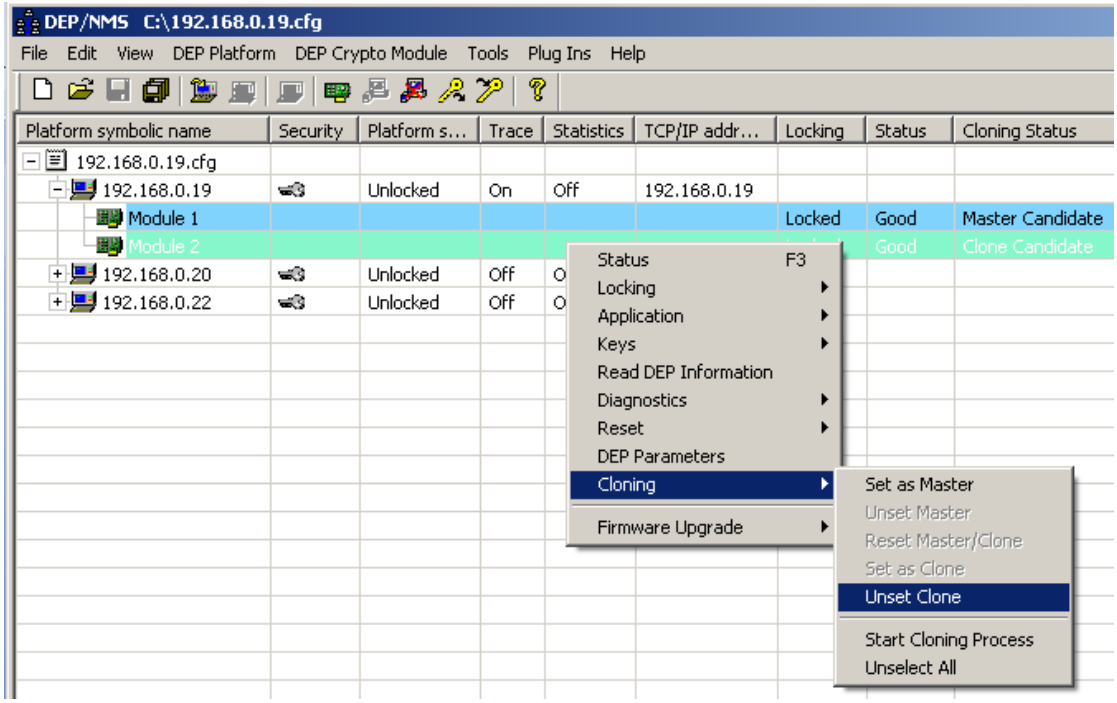
## 9.4. SETTING AS CLONE

To set a DEP Crypto Module as a Clone candidate, right-click on appropriate DEP Crypto Module, or if you want to set several DEP Crypto Modules as Clone candidates in the same time, press **Ctrl** or **Shift** and hold it while selecting appropriate DEP Crypto Modules and then right-click on any DEP Crypto Module, choose ***Cloning*** and then click on the **Set as Clone** option. Also you can set the DEP Crypto Modules as Clone from general menu. Select the DEP Crypto Modules you want to set as Clone, select **DEP Crypto Module** in the menu bar, choose **Cloning** and click on the ***Set as Clone*** option.




## 9.5. UNSET CLONE

To unset the previously set as Clone candidate DEP Crypto Module, right-click on the DEP Crypto Module, choose **Cloning** and then click on the **Unset Clone** option. Also you can unset the DEP Crypto Module Clone candidate from general menu. Select the DEP Crypto Module which you want to unset, click on the **DEP Crypto Module** in main window, choose **Cloning** and click on the **Unset Clone** option.



After the Clone candidate is unset, the **Cloning Status** will become **Not Set**. The background of the DEP Crypto Module line returns to the DEP Crypto Module line usual colour.

## 9.6. UNSELECT ALL

To unset all the previously set as Master and/or Clone candidate DEP Crypto Modules, right-click on any DEP Crypto Module, choose ***Cloning*** and then click on the **Unselect All** option. Also you can unset the DEP Crypto Module Master and/or Clone candidates from general menu. Click on the **DEP Crypto Module** in main window, choose **Cloning** and click on the **Unselect All** option.

**Unselect All** function is enabled only if at least one DEP Crypto Module is set as Master or Clone Candidate and Cloning Process is not started.

After all the DEP Crypto Modules are unset, the **Cloning Status** will become *Not Set* for all the DEP Crypto Modules' lines return to the line usual colour.

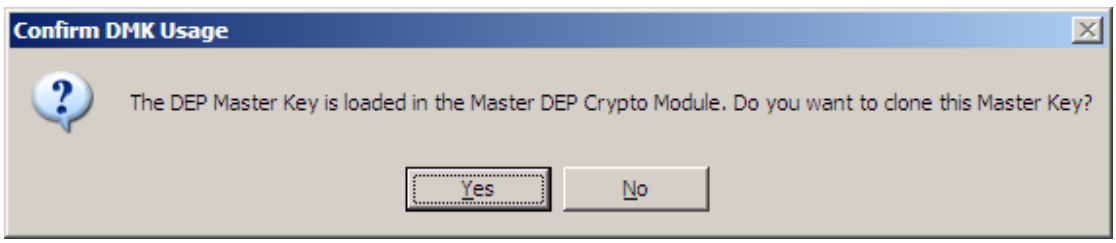
## 9.7. START CLONING PROCESS

***Note:***
Before starting the cloning process, one DEP Crypto Module should be set as Master and at least one Clone candidate should be selected (refer to the sections 9.2 and 9.4 for more information on how to set the Master and the Clones).

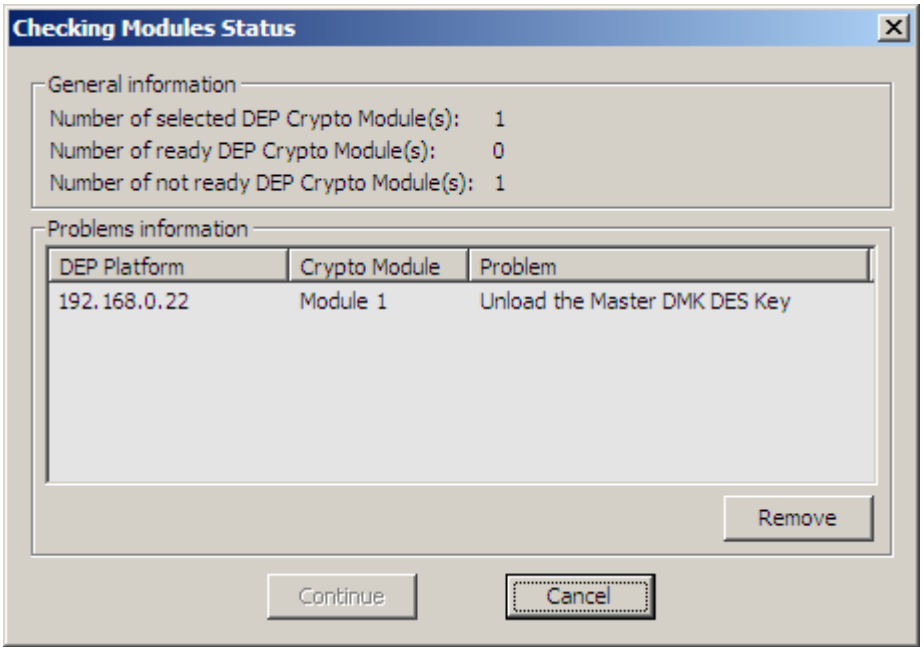
To initiate the cloning process, right-click on any DEP Crypto Module, select the **Cloning** menu and click on the **Start Cloning Process** option. Also you can start the cloning process from general menu. Click on the **DEP Crypto Module** in main window, choose **Cloning** and click on the **Start Cloning Process** option.

### 9.7.1. Cloning the Master DMK

If the Master DEP Crypto Module has already loaded DEP Master Key (DES or AES), then it can be cloned too. You will be asked to confirm the Master DMK cloning.



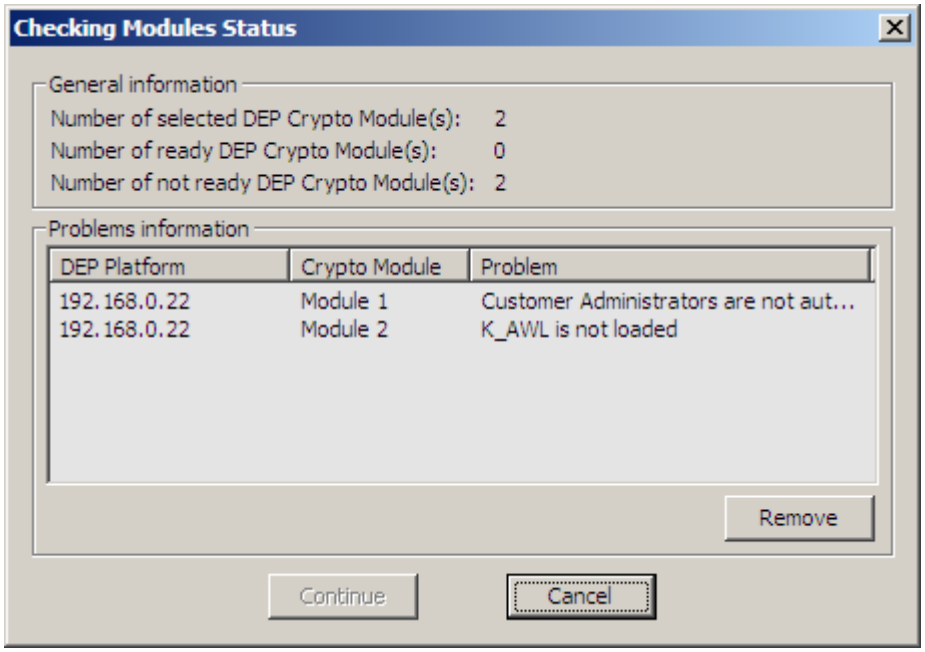
If you choose **Yes**, the application will clone the DEP Master Key. If you choose **No**, the application won't clone the Master Key and you will have a chance to delete the DMK from the Master.



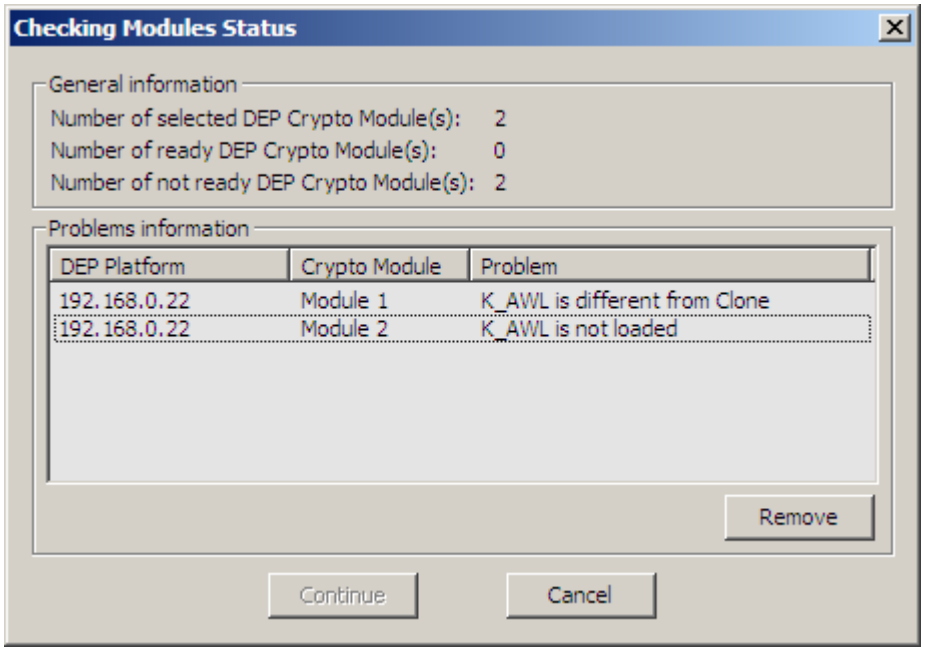

Now you can delete the DMK and continue the cloning process.
To stop the process and bring the DEP Crypto Modules in their previous status simply click the **Cancel** button.

### 9.7.2. Customer Administrators authentication on Master and KAWL Checking

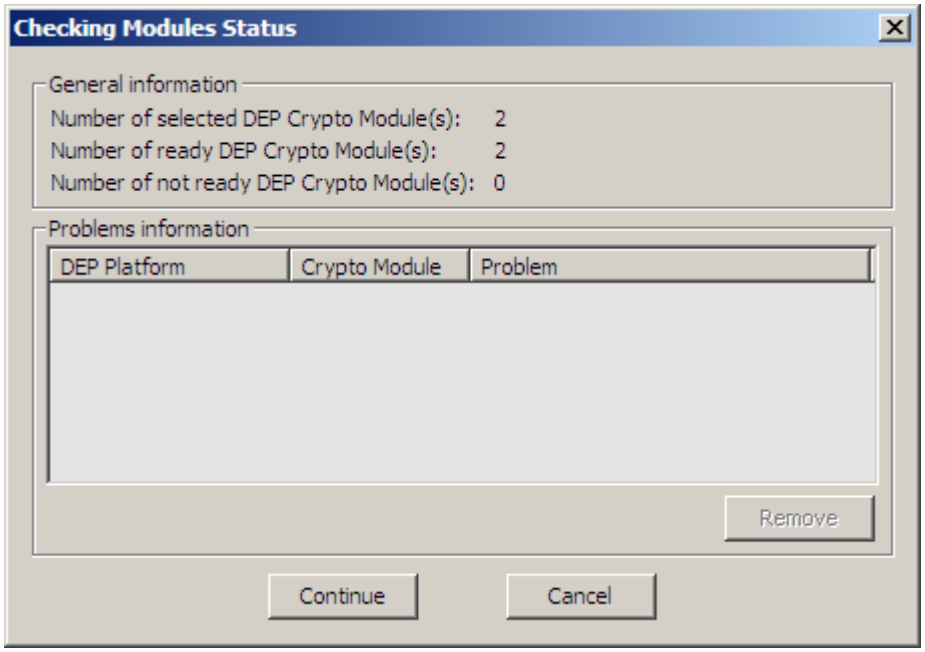
The Customer Administrators must be authenticated in order to start a cloning process. For more detailed information about how to authenticate the customer on Master DEP Crypto Module, refer to the document ***DEP Customer's Security Officer's Guide.***




The following dialog is displayed when Customer Administrators are authenticated on the Master, but K_AWLs are different or not loaded.




After doing required authentication the **Continue** button will be enabled**.**

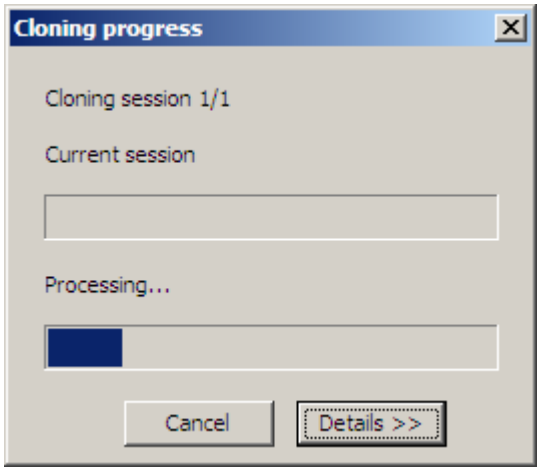


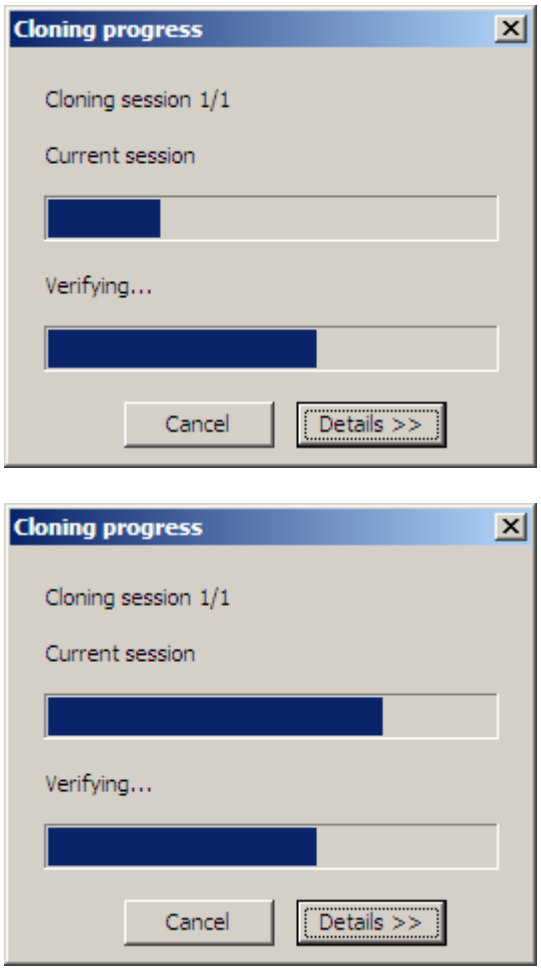

You can click **Continue** to proceed the cloning process, or **Cancel** to reject cloning.

### 9.7.3. Cloning progress dialog

**Cloning progress** dialog box will show the status of cloning process.
Actually the DEP/NMS can divide the process in multiple sessions if the number of clone candidates exceeds the maximum supported by the master.
For example, if there are 25 clone candidates, and maximum number supported by master is 10, then the DEP/NMS will organize 3 sessions. The number of current session and total number of sessions are in the first line of the progress dialog (see below).
It is important to remark that cloning two DEP Crypto Modules on the same platform is sequential, while cloning two DEP Crypto Modules on different platforms is parallel. So, DEP/NMS will divide clones in the way to minimize the overall cloning time.

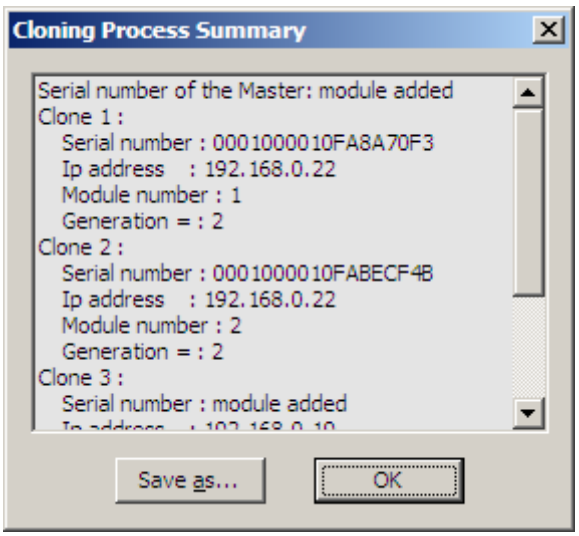
Examples of progress dialog:






### 9.7.4. Cloning summary

After finishing the cloning process the **Cloning Process Summary** dialog will show you the cloning results:




If you want to save the cloning summary as a text file click **Save as...**, if you want to close the window, click **OK**.

## 9.8. RESET MASTER/CLONE

**Reset Master/Clone** function is supposed to be used in unexpected situations, if the cloning process should be aborted.

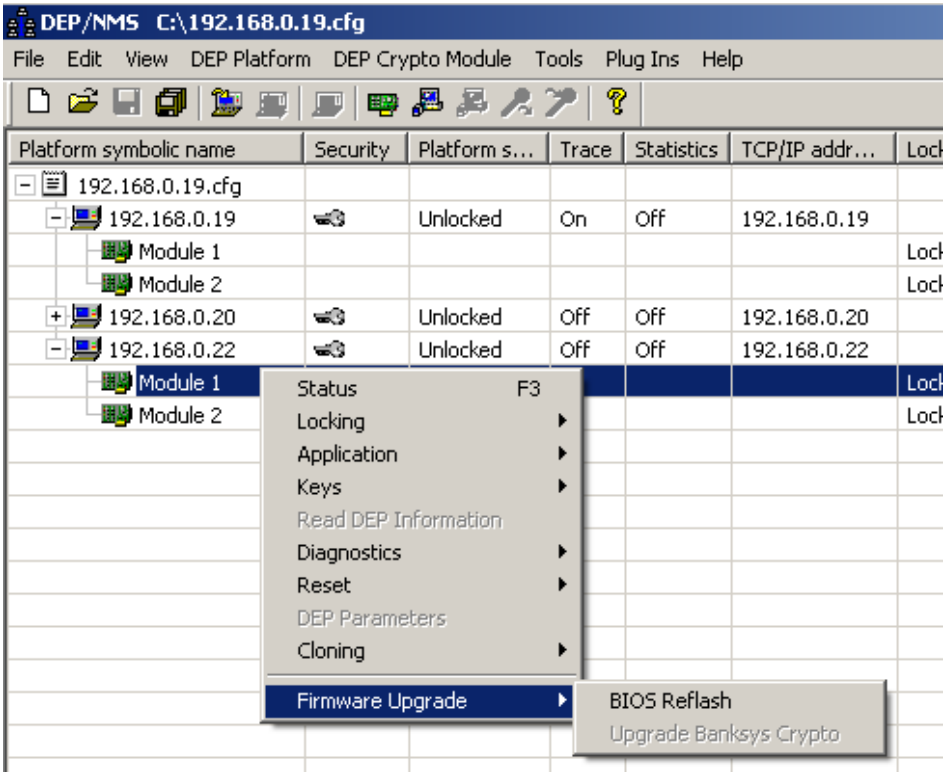
To interrupt the cloning process, right-click on any DEP Crypto Module involved in cloning process, select the ***Cloning*** and then click on the **Reset Master/Clone** option. Also you can reset the DEP Crypto Modules from general menu tab. Select any DEP Crypto Module involved in cloning process, click **DEP Crypto Module** in the menu tab, select **Cloning** and click on the **Reset Master/Clone** option.

Using the **Reset Master/Clone** function the Master candidate DEP Crypto Module will keep its initial state and the Clone candidate DEP Crypto Modules will lost all already cloned information.

# 10. FIRMWARE UPGRADE

*Note:*
This functionality is protected by the license dongle when more than one DEP Crypto Modules are selected. You can start Firmware upgrade without license dongle for one DEP Crypto Module.

The Firmware Upgrade menu item allows to reflash the bios and upgrade the Banksys Crypto firmware.




## 10.1. BIOS REFLASH

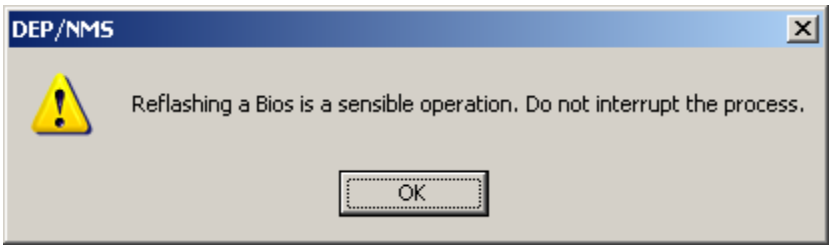
With the **Bios Reflash** function of **Firmware Upgrade** submenu you can reflash the Bios of the DEP Crypto Module(s).

Also the Bios is supporting the cloning functionality. The cloning will be enabled only if the Cloning Software is available on appropriate DEP Crypto Module. To set the Cloning Software on DEP Crypto Module the cloning supported Bios should be loaded.

*Note:*
The Reflash Bios function is available if the DEP Crypto Module is in boot level. The DEP Crypto Modules should be *locked.*

Bios Reflash operation is allowed on one or more DEP Crypto Modules. Simultaneous Bios Reflash operation for multiple selected DEP Crypto Modules is possible if the minimum version of DEP Platform software is VENUS 4.0.0 or higher.

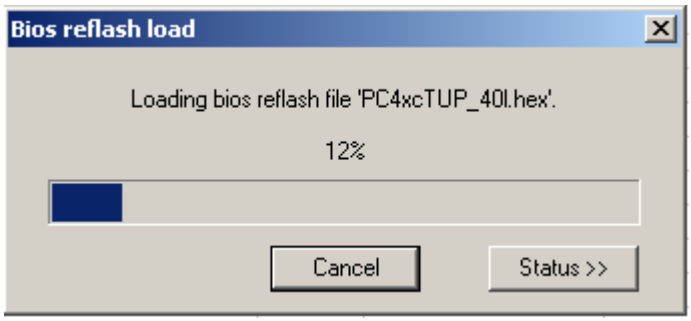
The procedure is identical to that of DEP Application loading, except that the user will be prompted for confirmation an additional time, in view of the impact of the operation.



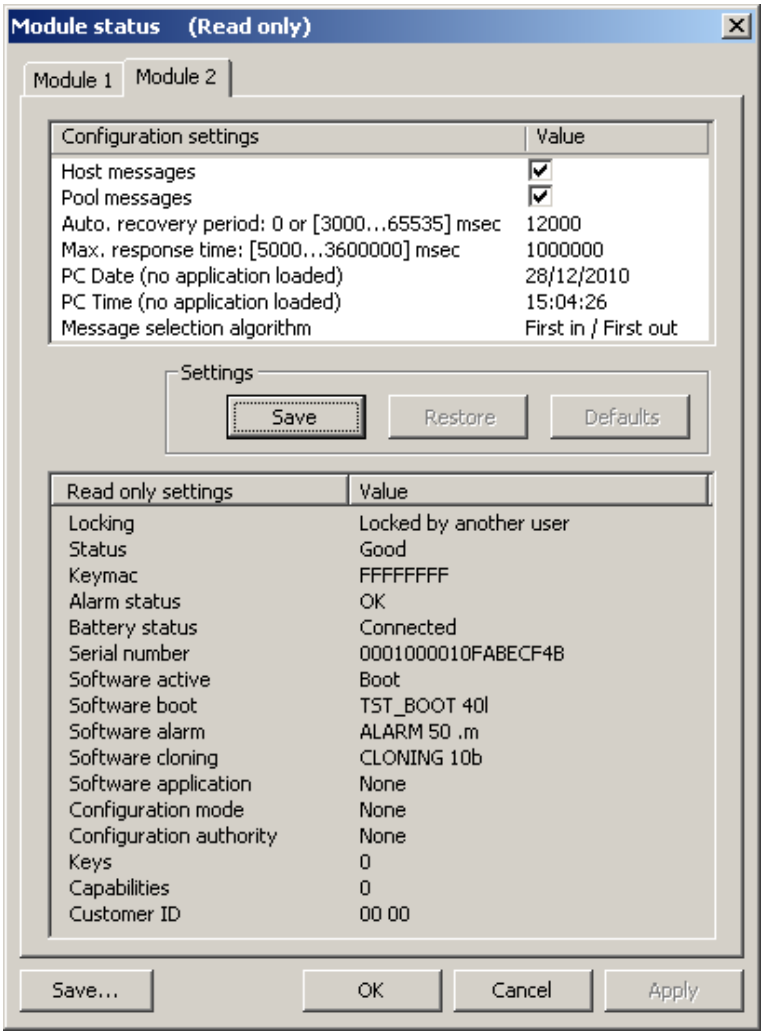

Once you have confirmed, the loading starts and the **Bios reflash load** dialog appears with a progress bar.

***Warning:***

Do not interrupt the application at this stage.




At the end of loading process the DEP/NMS will automatically perform *Reset Alarm Board* to activate new bios. To check whether the newly loaded bios is running, select the module and then choose the **Status** function from the **DEP Crypto Module** menu or simply click **F3**. The *Software boot* and the *Software cloning* are presenting the BIOS.




## 10.2. UPGRADE BANKSYS CRYPTO

The **Upgrade Banksys Crypto** function is used to upgrade the firmware of the Banksys Crypto. This chapter describes how to upgrade the firmware to new improved versions.

Firmware Upgrade operation allows to upgrade the Banksys Crypto on one or more DEP Crypto Modules.

### 10.2.1. Prerequisites

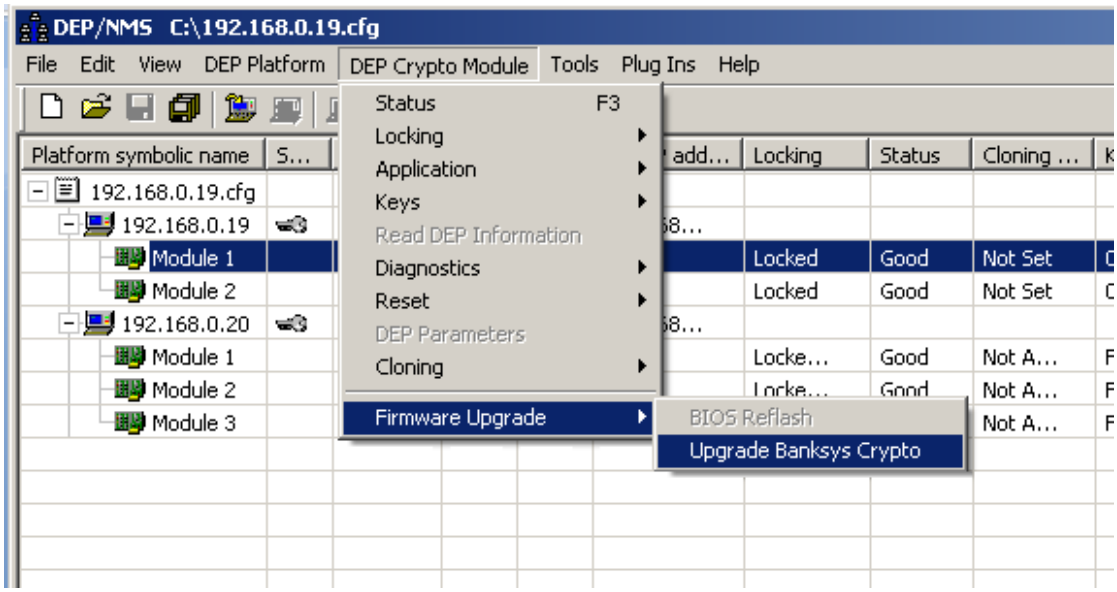
- The DEP Crypto Module should be locked;
- The version of DEP Crypto Module should be DEP/PCI V4;
- Minimum version of the DEP Platform Software must be VENUS 4.3.0 or higher.
- The minimum version of the DEP/NMS application must be 3.4.0.2;
- A DEP Application Software that support **I_STD_FW_UPGRADE** interface should be loaded on DEP Crypto Module;

- The **CAP_STD_FW_UPDATE** capability should be loaded on the DEP Crypto Module;
- All the DEP Crypto Modules should be at CUST Authority Level.

## 10.2.2. Starting the Banksys Crypto Upgrade

### 10.2.2.1. Starting operation for Single Selected DEP Crypto Module

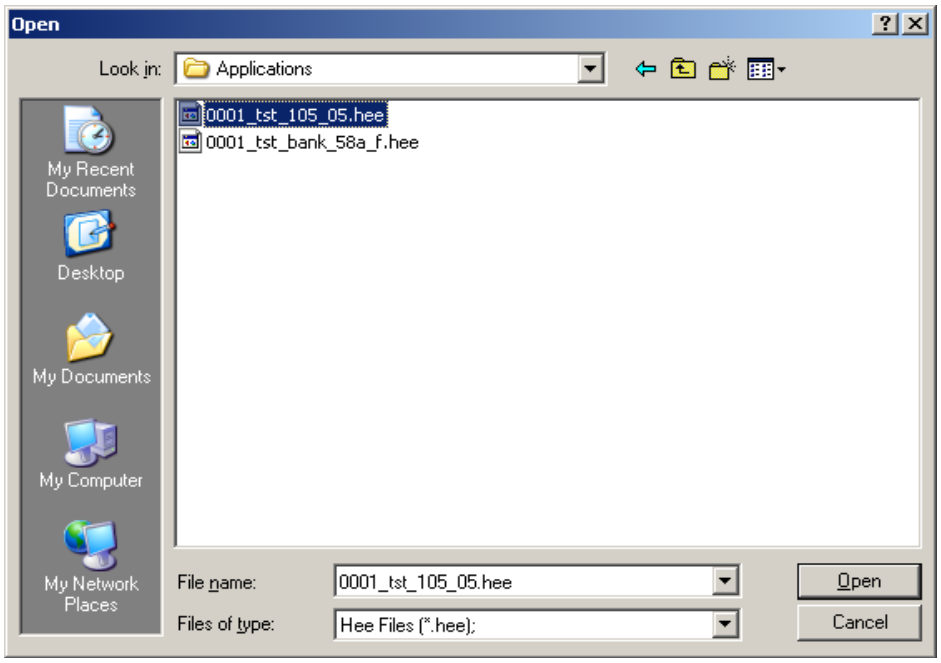
Select the appropriate DEP Crypto Module, right-click on it, select the **Firmware Upgrade** menu and click on the **Upgrade Banksys Crypto** option. Also you can start the firmware upgrade process from general menu. Click on the **DEP Crypto Module** in main menu, choose **Firmware Upgrade** and click on the **Upgrade Banksys Crypto** option.




The **Upgrade Banksys Crypto** option is enabled only if:

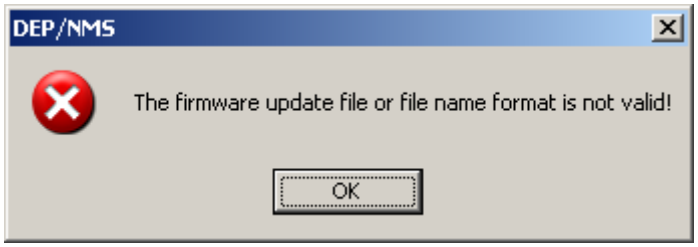
- the DEP Crypto Module is locked;
- the version of DEP Crypto Module is DEP/PCI V4.
- the minimum version of the DEP Platform Software is VENUS 4.3.0 or higher;
- the Application Software is loaded in DEP Crypto Module. For more information see paragraph 8.3.1 on page 53;
- the loaded DEP Application Software supports the Banksys Crypto upgrade functionality. To see if the Application Software supports the upgrade functionality, look at the Software DFS document. To support the Firmware Upgrade feature, the **I_STD_FW_UPDATE** interface must present in Software DFS list;
- the DEP Crypto Module(s) is upgraded to CUST authority level;
- the **CAP_STD_FW_UPDATE** capability is loaded in the DEP Crypto Module. For detailed information on how to load the capability, refer to the *DEP C-ZAM/DEP User Manual*.

When the DEP Crypto Module is ready and the **Upgrade Banksys Crypto** option of **Firmware Upgrade** submenu is enabled, you should select the file (*.hee file) you want to load on DEP Crypto Module. Select the appropriate file in opened **Open** dialog box and click **Open**.

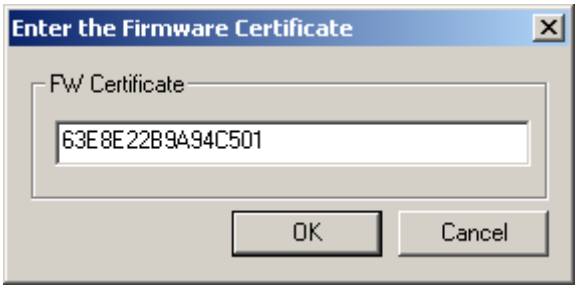



After you have selected the Firmware Upgrade file, you have to enter the *Firmware Certificate* value.
The FW Certificate can be found in the appropriate Firmware Authentication Code File (.sac) that is delivered together with the Firmware Upgrade file.

If the application file is not a valid firmware update file, the following error will occur. You should select the valid firmware upgrade file.

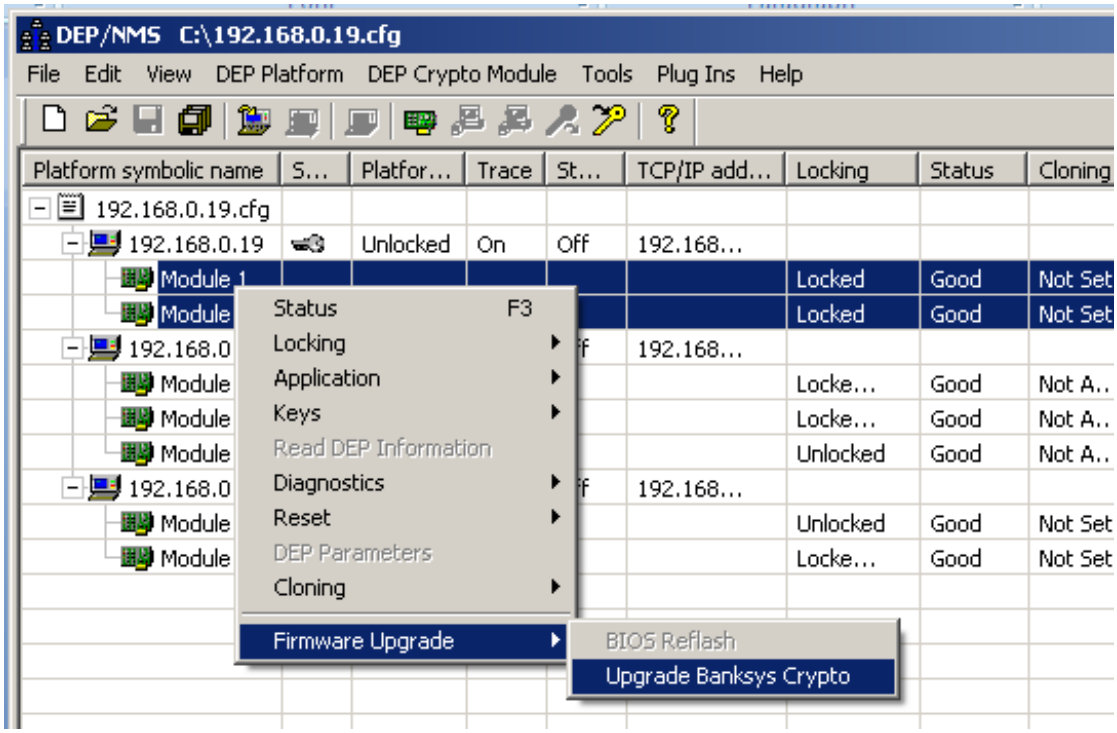



After selecting the valid application file the **Enter the Firmware Certificate** dialog box will open. Fill in the correct FW Certificate information.



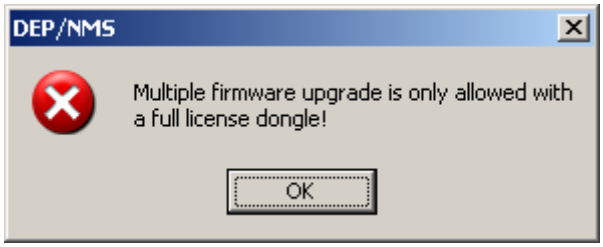
#### 10.2.2.2. Starting operation for Multiple Selected DEP Crypto Modules

For multiple selection press **Ctrl** or **Shift** and hold it while selecting appropriate DEP Crypto Modules, then right-click on any selected DEP Crypto Module, click on the **Firmware Upgrade** menu and choose the **Upgrade Banksys Crypto** option. Also you can start the firmware upgrade process from general menu. Click on the **DEP Crypto Module** in main menu, choose **Firmware Upgrade** and click on the **Upgrade Banksys Crypto** option.

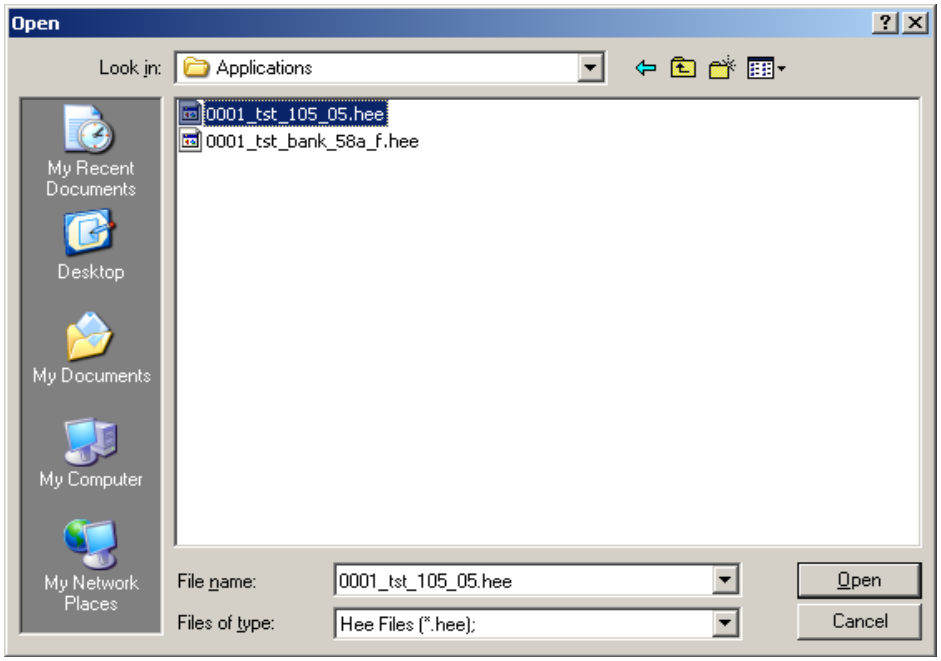



The **Upgrade Banksys Crypto** option is enabled only if the minimum version of the DEP Platform Software is 4.3.0 or higher;

The upgrading process will be cancelled if the USB dongle is not present. The following message-box will appear:




After selecting the **Upgrade Banksys Crypto** function, select the appropriate update file (*.hee file).



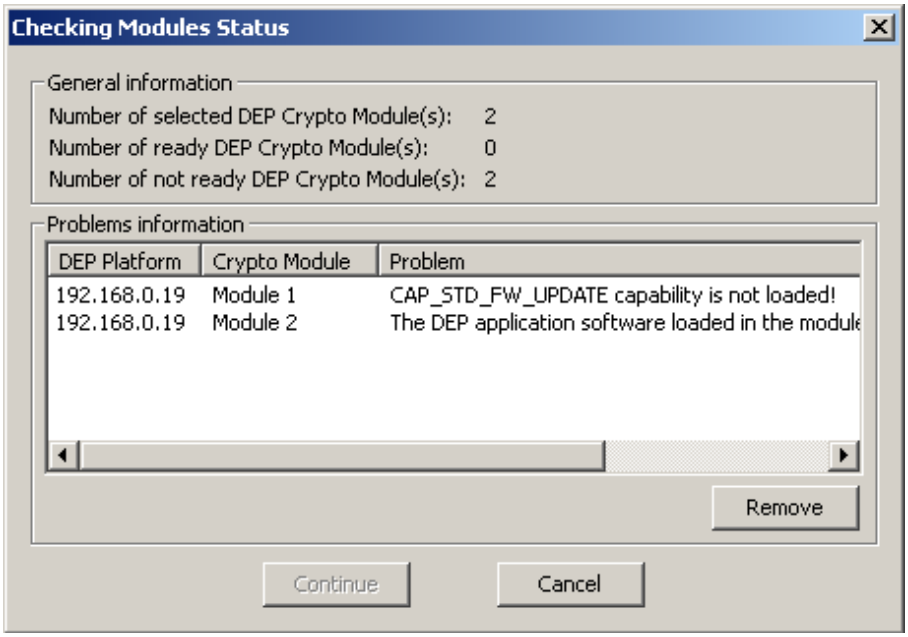

After you have selected the firmware upgrade file, enter the *Firmware Certificate* from the appropriate Firmware Authentication Code File (see paragraph 10.2.2.1 on page 108).

The next phase of the **Upgrade Banksys Crypto** operation consists of checking the following conditions:

- if the version of DEP Crypto Module is DEP/PCI V4;
- if the Application Software is loaded in DEP Crypto Module;
- if the loaded DEP Application Software supports the Banksys Crypto upgrade functionality (check the availability of **I_STD_FW_UPDATE** interface in DEP Application software);
- if the **CAP_STD_FW_UPDATE** capability is loaded in the DEP Crypto Module. For detailed information on how to load the capability, refer to the *DEP C-ZAM/DEP User Manual*.
- if the DEP Crypto Module(s) is upgraded to `CUST` authority level;

If one of those conditions is not fulfilled, an information dialog box (see below) will appear with the list of actions that user should take to bring the DEP Crypto Modules to *Ready* state.

For example, if some of the selected DEP Crypto Modules don't have **CAP_STD_FW_UPDATE** capability loaded or the loaded Application Software doesn't support the Banksys Crypto upgrade functionality, the following problems will occur:



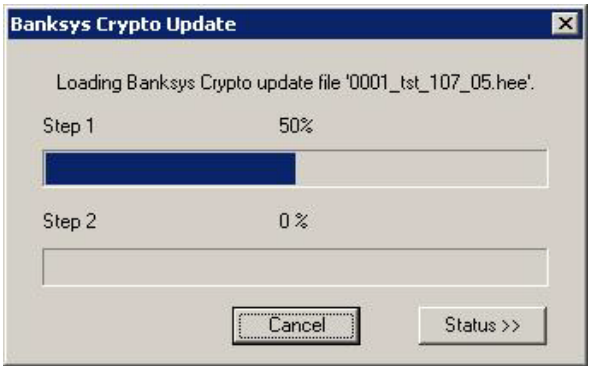

Below is the list of errors which can appear in Problems Information list:

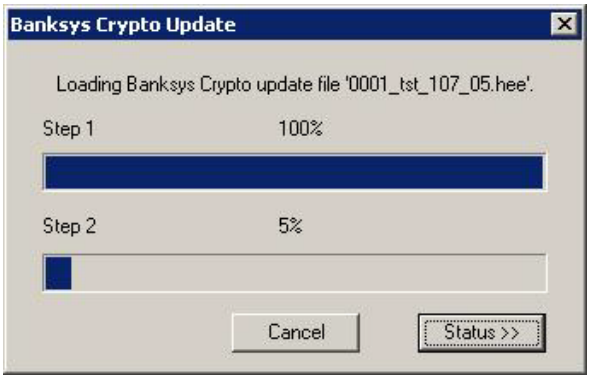
- *"Banksys Crypto upgrade is only allowed on DEP/PCI V4.0 modules!"*. This kind of error appears if the selected DEP Crypto Module's version is not DEP/PCI V4.0.
- *"The loaded DEP Application Software doesn't support the Banksys Crypto upgrade functionality!"*. The Application Software loaded on DEP Crypto Module(s) doesn't support the I_STD_FW_UPGRADE interface.
- *"Bring to the 'Customer' level!*. The DEP Crypto Module should be at CUST Authority level.
- *"The CAP_STD_FW_UPDATE capability is not loaded!"*. The CAP_STD_FW_UPDATE capability should be loaded on selected DEP Crypto Modules to continue the process.
- *"For multi module upgrade the USB license dongle is not installed!"*. The USB license dongle should be installed to continue the process.
- *"DEP Platform Software non compatible, the version 4.3.0 or higher need to be installed!"*. The minimum version of the DEP Platform Software should be VENUS 4.3.0.

While displaying the above information dialog box, application is doing background check for state of DEP Crypto Modules enumerated in **Problems Information** list. When one or more DEP Crypto Modules are brought to *Ready* state, **Problems Information** list and **General Information** will be updated in the dialog box.
It is possible to select and remove one or more not ready modules from **Problems Information** list.
**Continue** button will be enabled when in **Problem Information** list all the DEP Crypto Modules will be in *Ready* state. To terminate the Banksys Crypto Upgrade process for all selected DEP Crypto Modules click **Cancel**.

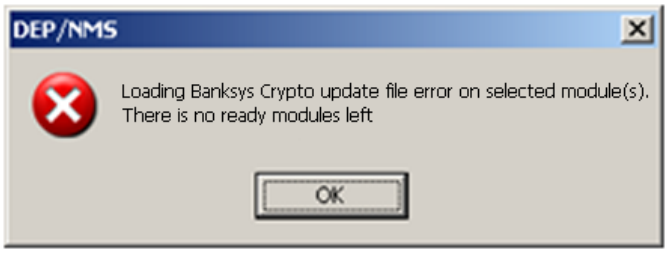
#### 10.2.2.3. Monitoring the loading process

During the actual loading of the Banksys Crypto update file, the **Banksys Crypto Upgrade** dialog box will appear, displaying the progress of the process. It also displays the name of the file that is being loaded.

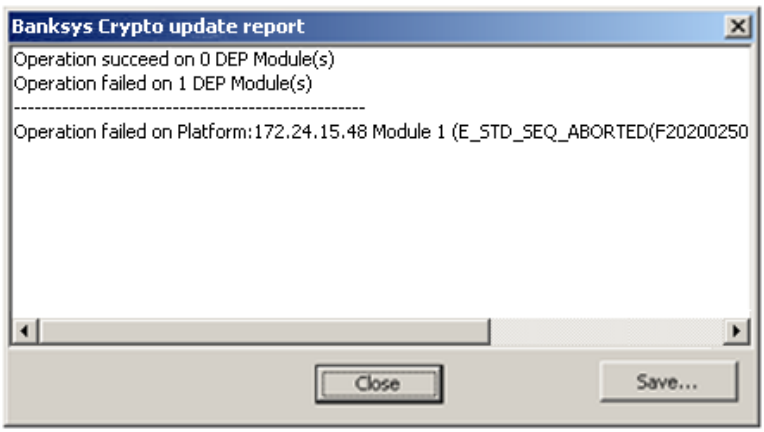



If there is no ready DEP Crypto Module left during the loading process the following error will appear, and the load process will be interrupted.



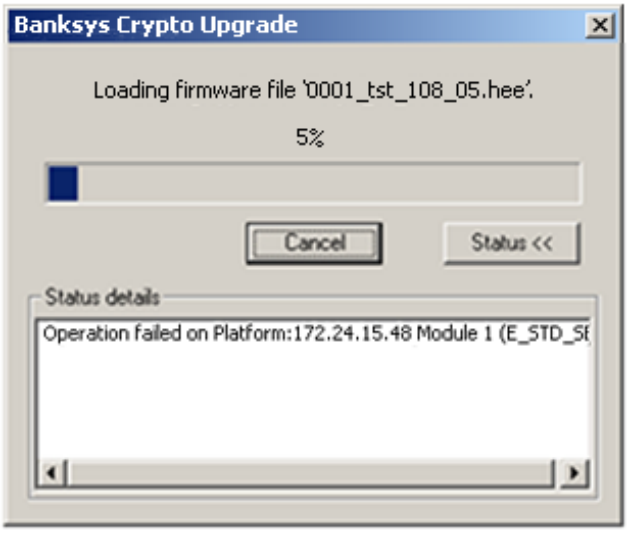

After pressing the **OK** button, the **Banksys Crypto update report** dialog will appear with the total number of successful and failed DEP Crypto Module(s). For each failed DEP module(s) there is a status line with the failure reason.


Banksys Crypto update report
Operation succeed on 0 DEP Module(s)
Operation failed on 1 DEP Module(s)
Operation failed on Platform:172.24.15.48 Module 1 (E_STD_SEQ_ABORTED(F20200250
Close
Save...

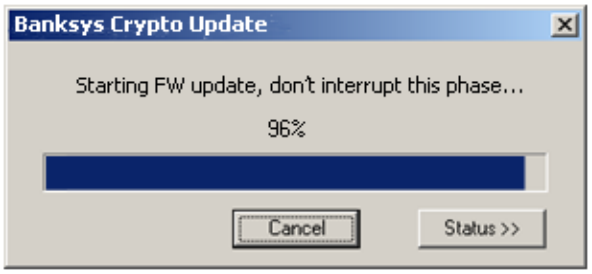
Below is the list of errors which can appear in report dialog box:

- E_STD_SEQ_ABORTED. This kind of error appears if entered Firmware Certificate value was incorrect.
- E_STD_DATA_INVALID. This kind of error returned by an interface if the firmware file was corrupted.

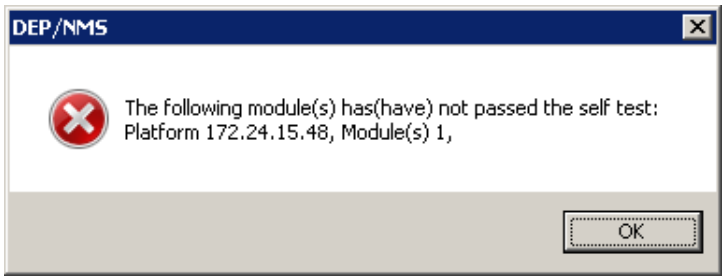
When multiple DEP Crypto Modules have been selected but not all of them are ready to proceed with the loading operation during the loading process, the **Banksys Crypto Upgrade** dialog box can be expanded to show the status of the failed DEP Crypto Module(s). To expand the dialog box click the **Status>>** button.




If the Banksys Crypto was successfully updated, it starts automatically:



After resetting the DEP, the self-test of DEP Crypto Modules is being started. If the DEP Crypto Module(s) will not pass the self test, the following error will occur:

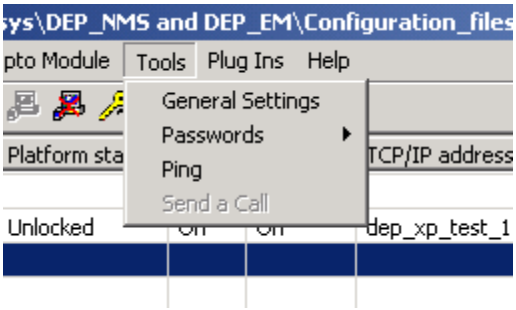



At the end of loading process to check the version number of currently loaded Banksys Crypto select the **Dep Self-Test** function (see paragraph 8.6.3 on page 82).

# 11. TOOLS

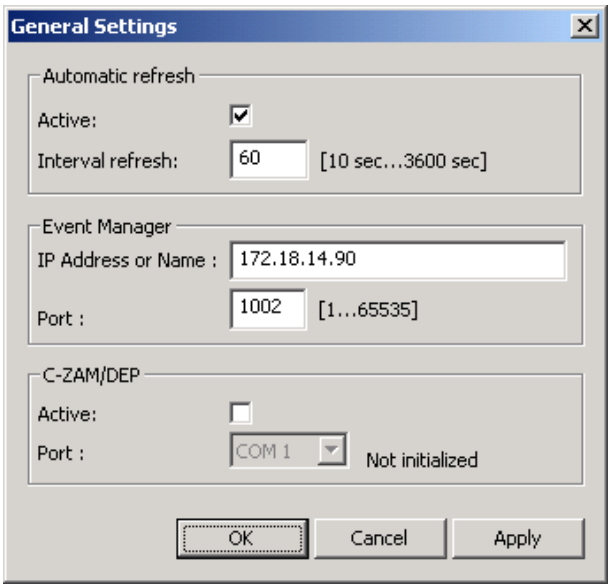
The **Tools** menu contains following items:

- **General Settings**
- **Passwords**
- **Ping**
- **Send a Call**




## 11.1. GENERAL SETTINGS

To establish the automatic refresh, event manager and C-ZAM/DEP connection settings select the **General Settings** item from **Tools** menu. The following dialog box will appear.




It presents 3 groups of settings, related to:

- **Automatic refresh**
- **Event Manager**
- **C-ZAM/DEP**

The data are stored in the file `DEP_NMS.INI`.

The dialog box presents three buttons:

- **Cancel**: configuration is not modification and the window is closed;
- **Apply**: updates the properties of the DEP/NMS without closing the window;
- **OK**: updates the properties of the DEP/NMS and closes the window.

### 11.1.1. Automatic refresh

The **automatic refresh** is active only when it is selected in the **General Settings** window and if a **license hardware USB dongle** is present.

If this feature is active, the information in the main window will be automatically updated, except for the DEP Platform which is selected or has one of its DEP Crypto Modules selected.

By default, the automatic refresh is activated. The refresh intervals defined in the **Interval Refresh field**.
This parameter determines the time that the DEP/NMS, after the last refresh has been done, waits before performing again another automatic refresh of *all* the information viewed in the main window. The value must be in the range [10sec...3600sec].
A default value of 180 sec is foreseen.

The automatic refresh relies on the **get status** mechanism. If the result is not good (for example: the DEP Crypto Module is in fatal mode, bad connection to the DEP Platform. etc...), the information appears in the main window on the corresponding line of the DEP Platform or DEP Crypto Module concerned.

***Notes:***

1. The serial numbers of the DEP Crypto Modules are saved in the configuration file; if during the refresh a difference appears between the expected value and the value that is read, the corresponding line is highlighted.

2. A new DEP Crypto Module that is connected to a DEP Platform is not automatically added (see Modifying platform information on page 22).

### 11.1.2. Event Manager

DEP/NMS uses the TCP/IP address or name and the TCP/IP port to advertise alarms to the DEP/EM application that will listen to the TCP/IP address and port. If these fields are not filled in or nobody listens, nothing is sent.

The Event Manager will be advertised in case of:
- Modification of the configuration of a DEP Platform or a DEP Crypto Module,
- Modification in the communication protocol,
- Modification in the application protocol,
- End of application,
- Shutdown,
- Reset of alarms,
- Forced unlock of a DEP Platform or a DEP Crypto Module.

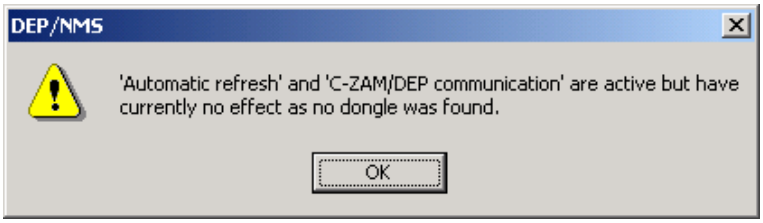
### 11.1.3. C-ZAM/DEP

In the bottom part of the **General Settings** dialog box, you can configure the port for the C-ZAM/DEP that is to be used on the PC on which the DEP/NMS application is running.

With the option **Active**, you determine whether the C-ZAM/DEP is to be active or not. By default, it is not activated.
Once it is active, you can select via the list box underneath the COM or RS232 **Port** that is to be used for the C-ZAM/DEP operations. The label to the right of the list box indicates whether the port is `initialised` or `not initialised`.

***Warning:***

Activating the **Automatic Refresh** or the C-ZAM/DEP if you have only the *lite* version of the DEP/NMS application has no effect. The following information box will appear if you do so.



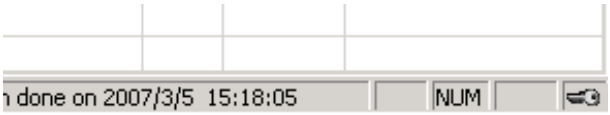

## 11.2. MANAGING PASSWORDS

### 11.2.1. Understanding security levels

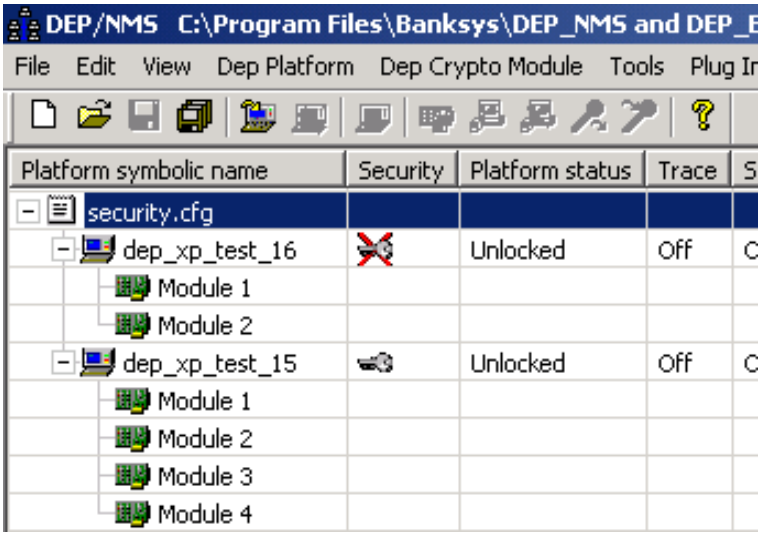
The DEP/NMS is able to work with a secure protocol for communicating with the DEP Platforms.

There are two levels of security:
- **Semi-secure**: works with a default password;
- **Fully secure**: works with a user-defined password.

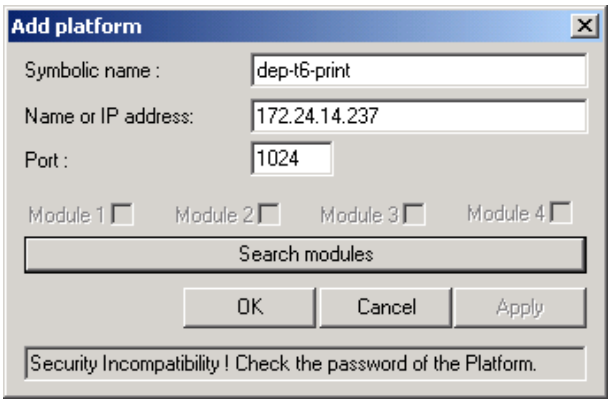
During the first start-up of the DEP/NMS the semi -secure mode is automatically used. This is indicated at the right hand side of the status bar by means of a *single* key.



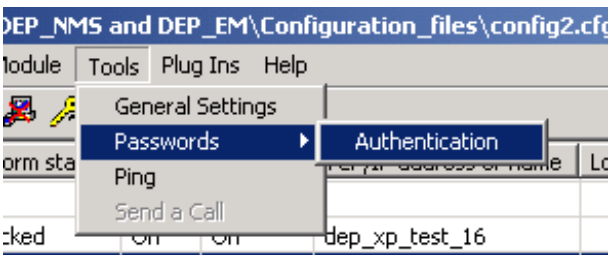

The security level of the DEP/NMS itself determines the maximum level of security for all the DEP Platforms that it is to manage:
- DEP Platforms without security (that is, platform software version 1.x)
  A key with a red cross is present in the **Security** column.
- DEP Platforms with security level *semi-secure* (that is, platform software version 3.x or higher)
  A key is present in the **Security** column.




If you will try to add to the configuration a DEP Platform with a higher security level, this results in *security incompatibility*.
The status bar of the **Add platform** dialog box will display an error message:




To realise authentication between the DEP/NMS and the DEP Platforms, select the **Authentication** function from the **Passwords** submenu**.**

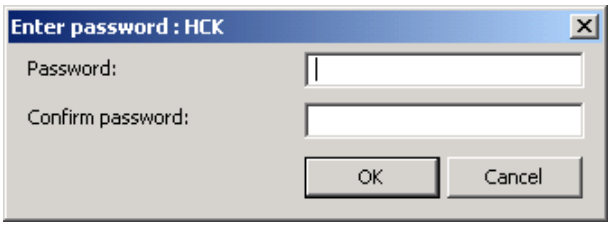



It allows you to define or modify the password used for authentication between DEP/NMS and the DEP Platform (**for security**).
The password is permanent: if the DEP/NMS application is restarted, it is saved from this password.

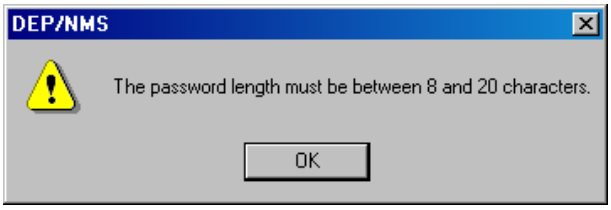
### 11.2.2. Entering a password

With the **Enter a password** function, you can provide the initial password needed for the authentication between the DEP/NMS and the DEP Platforms that it is to manage. Both entities must have the same password.

In the **Enter password** dialog box, enter the password once in the **Password** field and repeat it in the **Confirm password** field.
To finish, click **OK**.

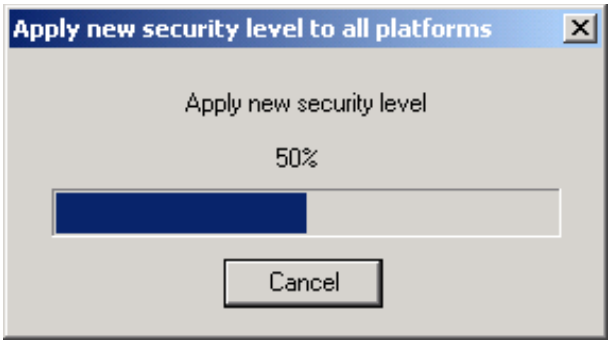



In both fields, the password characters are masked.
The password length must be between 8 and 20 characters; otherwise the following message box will appear:

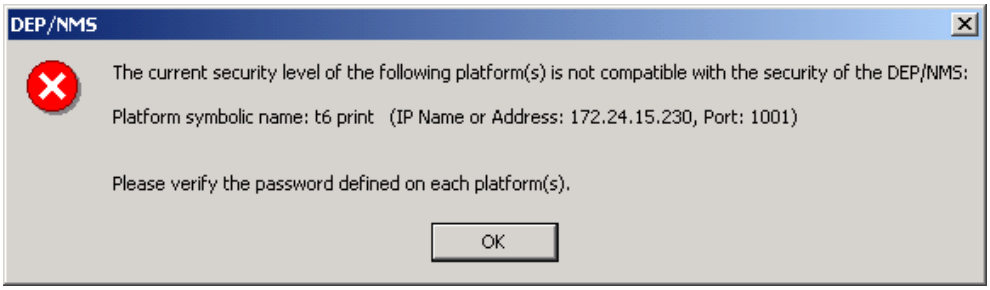



***Note:***

When you have confirmed the password, the DEP/NMS tries to apply it for all managed platforms.



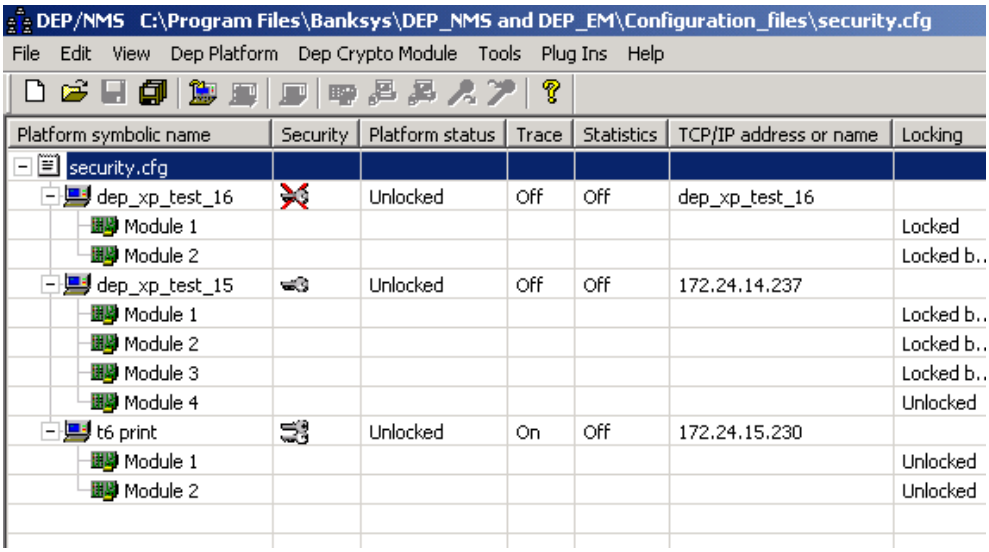

If a problem occurs, the message box notifies you of the error that has occurred.


DEP/NMS
The current security level of the following platform(s) is not compatible with the security of the DEP/NMS:
Platform symbolic name: t6 print (IP Name or Address: 172.24.15.230, Port: 1001)
Please verify the password defined on each platform(s).
OK

At this stage, the security level of the DEP/NMS is *fully secure*. This is indicated at the right hand side of the status bar by means of two keys.

The fully secure DEP/NMS can manage:

- DEP Platforms without security (that is, platform software version 1.x)
  A key with a red cross is present in the **Security** column.
- DEP Platforms with the *semi-secure* security level (that is, platform software version 3.x or higher)
  A key is present in the **Security** column.
- DEP Platforms with the *fully secure* security level (Platform software version 3.x or higher)
  Two keys are present in the **Security** column.




### 11.2.3. Modifying a password

The **Modify a password** function is very similar to the previous one. It is used when the password has previously been defined and must be changed.

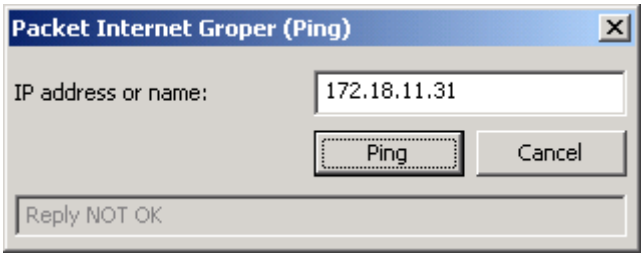
In the **Modify password** dialog box, there are three fields: one for the current password, one for the new password and one to confirm the new password.

This dialog box also provides the possibility to restore the default password. In that case, you only have to fill in the current password.

## 11.3. TESTING LAN CONNECTION TO THE HOST

If you want to test the LAN connection between the DEP Platform and its hosts, select the **Ping** function from the **Tools** menu.
The **Packet Internet Groper (Ping)** dialog box will appear.
Enter the IP-address or the host name in *IP address or name* field and click **Ping** to start the test.

The feedback and the outcome of the test appear in the status bar at the bottom of the box. The screenshots below illustrate the kind of information that can be appear in the status bar.




Be aware that this host may be on another network than the one of the PC where the DEP/NMS application is running (via the gateway).

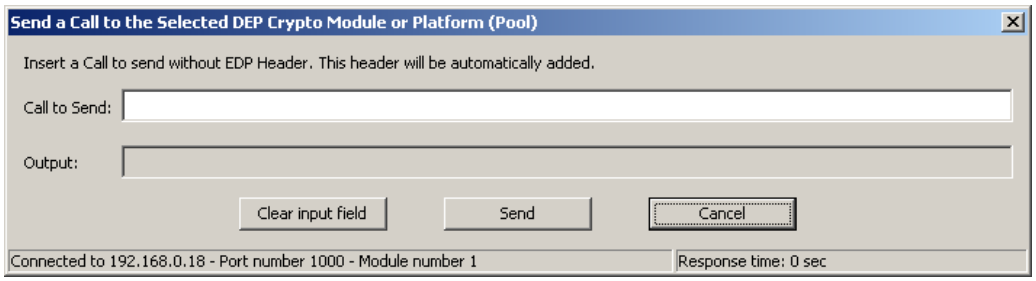
## 11.4. SENDING A CALL TO A CRYPTO MODULE

From within DEP/NMS, you can send a specific call to a selected DEP Crypto Module using the **Send a Call** function from the **Tools** menu.

> ***Warning:***
>
> This function is only available if you have the *Hardware Licence USB dongle*.

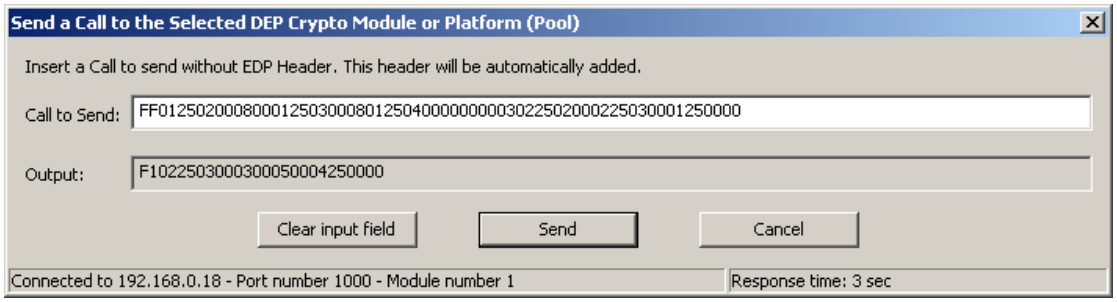
First, select a DEP Crypto Module or a DEP Platform and then click **Send a Call**. If you select a Crypto Module, the call is sent to that module only; if you select a DEP Platform, the call is sent to its pool of Crypto Modules.

The **Send a Call…** dialog box will appear:


Send a Call to the Selected DEP Crypto Module or Platform (Pool)
Insert a Call to send without EDP Header. This header will be automatically added.
Call to Send:
Output:
Clear input field
Send
Cancel
Connected to 192.168.0.18 - Port number 1000 - Module number 1
Response time: 0 sec

In the *Call to Send* field fill in the call and click the **Send** button to actually transmit the call to the DEP Crypto Modules.
The reply will appear in the *Output* field underneath. This output box is read-only, but you can select and copy the content by double-clicking in the field.

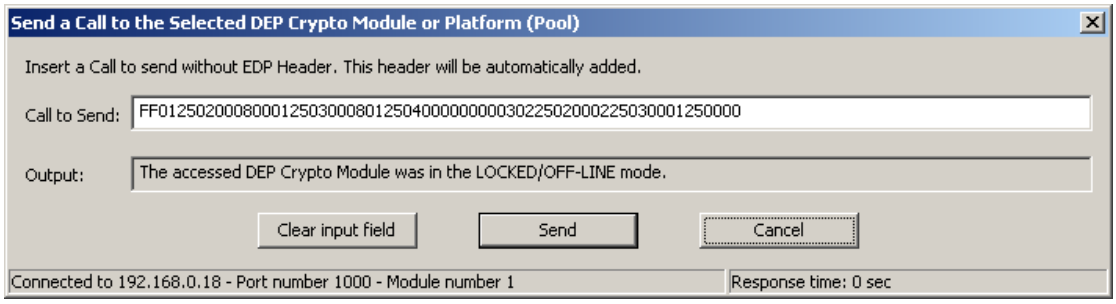
The status bar at the bottom of the dialog box contains information about the connection and the response time.


Send a Call to the Selected DEP Crypto Module or Platform (Pool)
Insert a Call to send without EDP Header. This header will be automatically added.
Call to Send:
FF012502000800012503000801250400000000030225020002250300012500000
Output:
F10225030003000500042500000
Clear input field
Send
Cancel
Connected to 192.168.0.18 - Port number 1000 - Module number 1
Response time: 3 sec

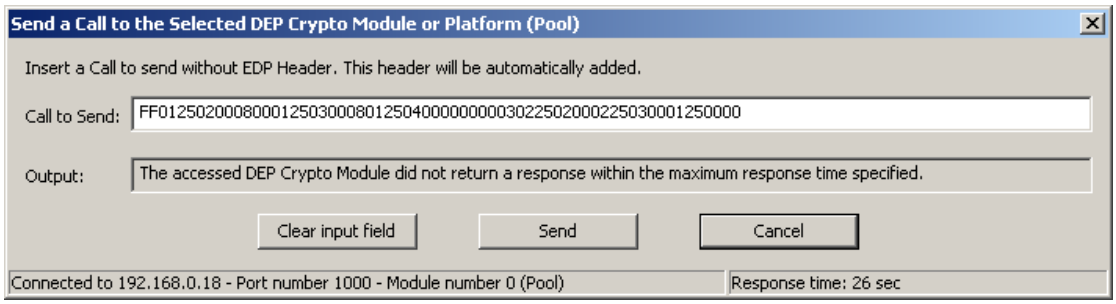
To close the dialog box, click **Cancel**. If you do so during the execution of the call, the connection with the DEP Crypto Module will be terminated and the dialog box will be closed.

To clear the *Call to Send* field click the **Clear input field button**.

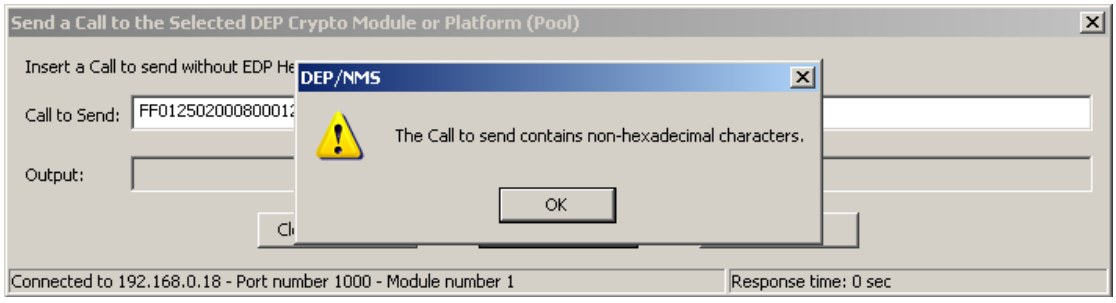
To send a call to a DEP Crypto Module, it must be *unlocked*. If not an error message will appear in the **Output** field.


Send a Call to the Selected DEP Crypto Module or Platform (Pool)
Insert a Call to send without EDP Header. This header will be automatically added.
Call to Send:
FF012502000800012503000801250400000000030225020002250300012500000
Output:
The accessed DEP Crypto Module was in the LOCKED/OFF-LINE mode.
Clear input field
Send
Cancel
Connected to 192.168.0.18 - Port number 1000 - Module number 1
Response time: 0 sec

If an error occurs during the transmission of the call, the error message will be translated and showed in the output box:

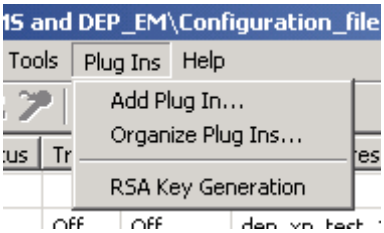

Send a Call to the Selected DEP Crypto Module or Platform (Pool)
Insert a Call to send without EDP Header. This header will be automatically added.
Call to Send:
FF012502000800012503000801250400000000030225020002250300012500000
Output:
The accessed DEP Crypto Module did not return a response within the maximum response time specified.
Clear input field
Send
Cancel
Connected to 192.168.0.18 - Port number 1000 - Module number 0 (Pool)
Response time: 26 sec

DEP/NMS verifies the call before sending it and, in case of problems, it displays a warning.


Send a Call to the Selected DEP Crypto Module or Platform (Pool)
Insert a Call to send without EDP He
Call to Send:
Output:
DEP/NMS
The Call to send contains non-hexadecimal characters.
OK
Connected to 192.168.0.18 - Port number 1000 - Module number 1
Response time: 0 sec

# 12. WORKING WITH PLUG INS

To extend the functionality of DEP/NMS, Atos Worldline has developed additional tools, referred to as *Plug Ins*, which you can integrate in the application.
By default, you can add and organize plug-ins in DEP/NMS with the **Add Plug in...** and **Organize Plug Ins**... functions from the **Plug Ins** menu.
Once a plug-in has been added, it will appear in **Plug Ins** menu.




The information about the plug-ins that have been added is stored in the `DEP_NMS.INI` file. It allows correct rebuilding of the menu when the application restarts or after an upgrade.

***Remarks:***

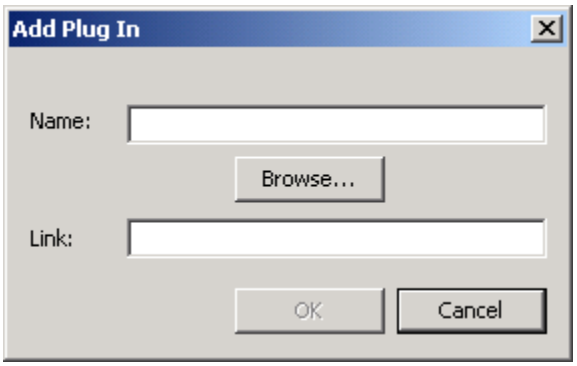
1. Before you can *add* a plug in, you need to *install* it (via its own installation procedure).

2. Plug-ins take over the TCP/IP configuration of the DEP/NMS and need no configuration of their own.

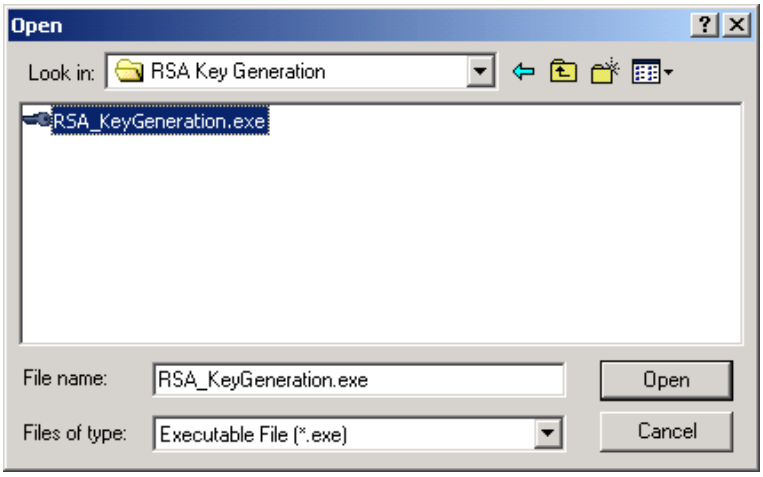
3. Managing plug-ins is possible without the *Hardware Licence USB dongle*, but using them, on the contrary, is not.

## 12.1. ADDING PLUG INS

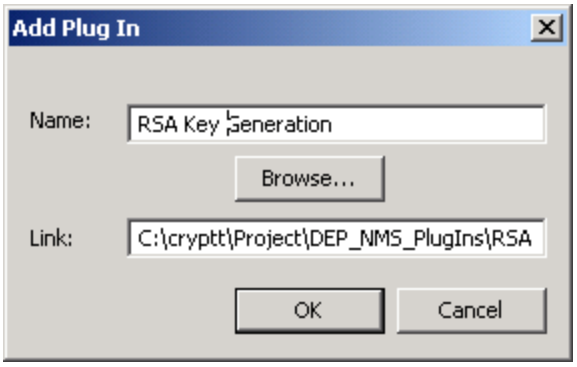
To add a plug-in to the DEP/NMS application, select the **Add Plug In...** function from the **Plug Ins** menu.
The **Add Plug In** dialog box will appear.




In the *Name* field supply the name of the plug-in that you want to add. The **Browse** button lets you find on your system the executable for the plug-in.

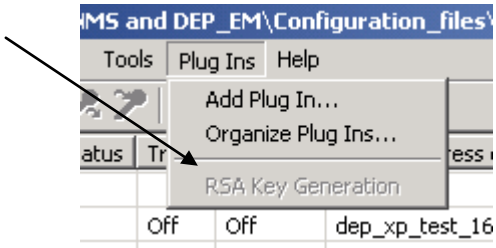



By default, the name of the executable that you have selected will be entered in the *Name* field. You can, however, change the name.



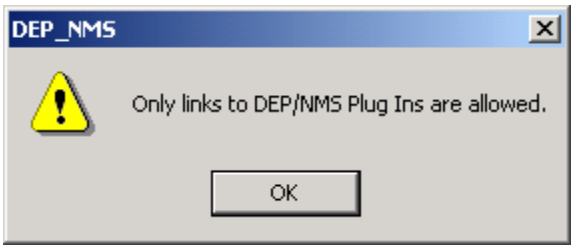

When you click **OK**, a link to the plug-in will be inserted in the **Plug Ins** submenu.

If the *hardware license USB dongle* is not present, the name of the plug-in is added to the **Plug Ins** menu, but it is disabled.



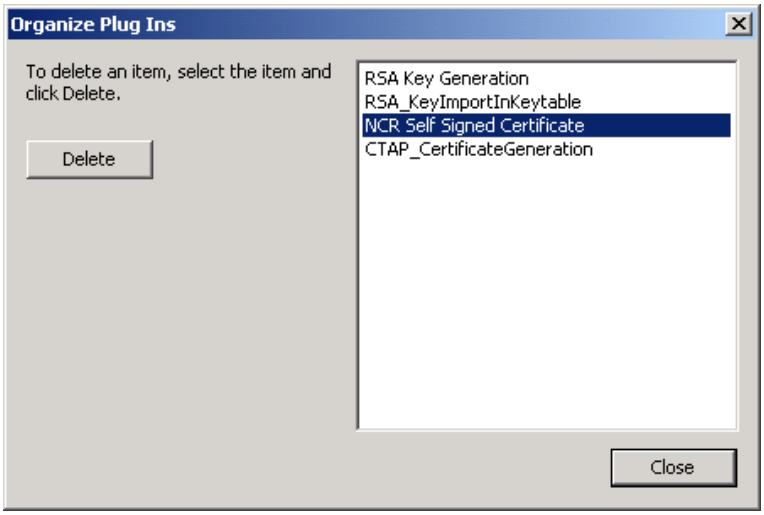

You can add up to twelve Plug-Ins.

In case of adding an invalid plug-in, an error box will appear.

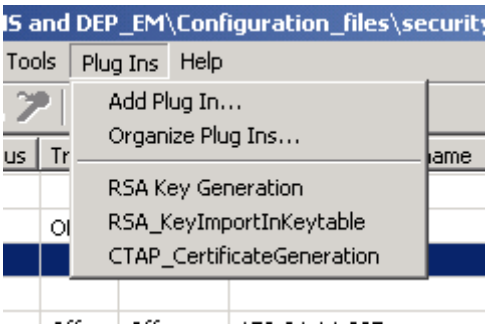


## 12.2. ORGANISING PLUG INS

With the **Organize Plug Ins...** function you can remove the name of plug-in(s) from the list in the **Plug Ins** menu.
If you select the function, the **Organize Plug Ins** dialog box will appear. To remove the plug-in select its name and click the **Delete** button.




The plug-in will be removed from the list.



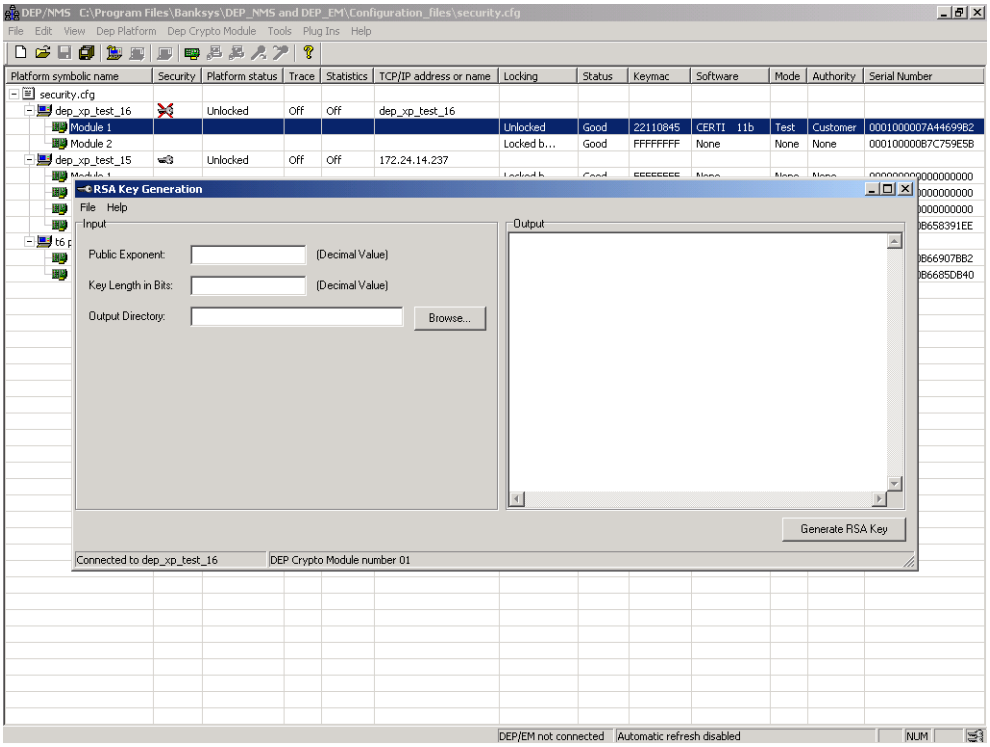

***Remark:***

Removing a plug-in from the DEP/NMS **Plug Ins** menu, does not imply uninstallation of the plug-in.

## 12.3. USING PLUG INS.

Plug–ins are only available if the *Hardware license USB dongle* is present.
To start using a plug-in, select the appropriate DEP Crypto Module and click on the appropriate plug–in in the **Plug Ins** menu. The appropriate application window will open.

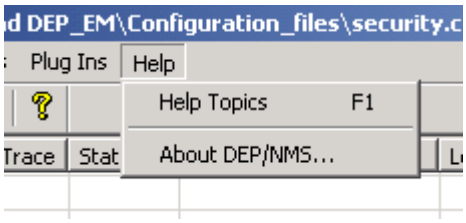
The image below illustrates the use of the plug in **RSA Key Generation**.




For more detailed information on **RSA Key Generation plug-in**, refer to the *RSA Key Generation User Manual.*

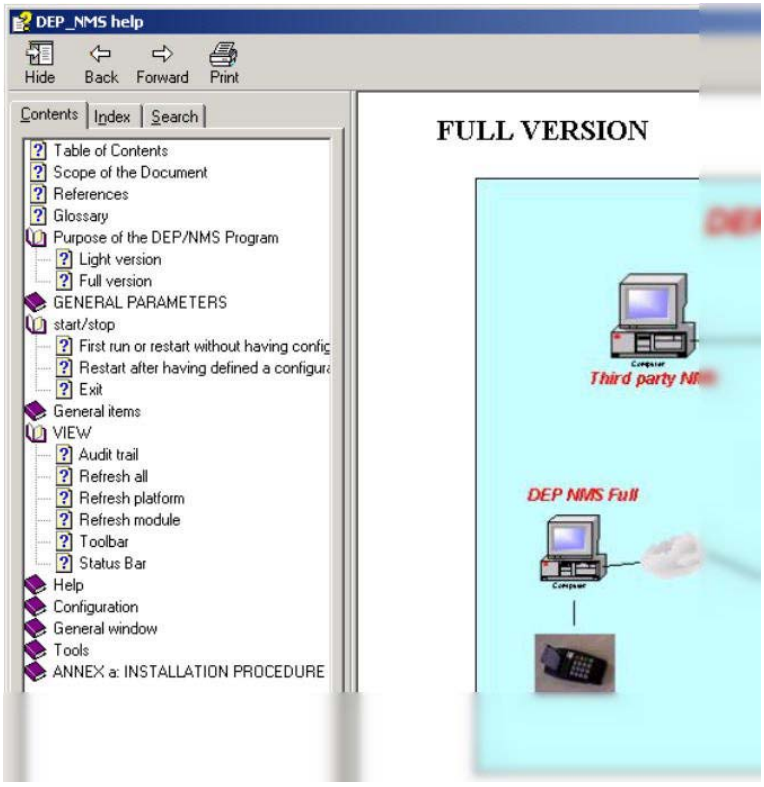
# 13. OBTAINING HELP

The DEP/NMS application has integrated help facilities. The **Help** menu on the DEP/NMS main window contains the following functions:



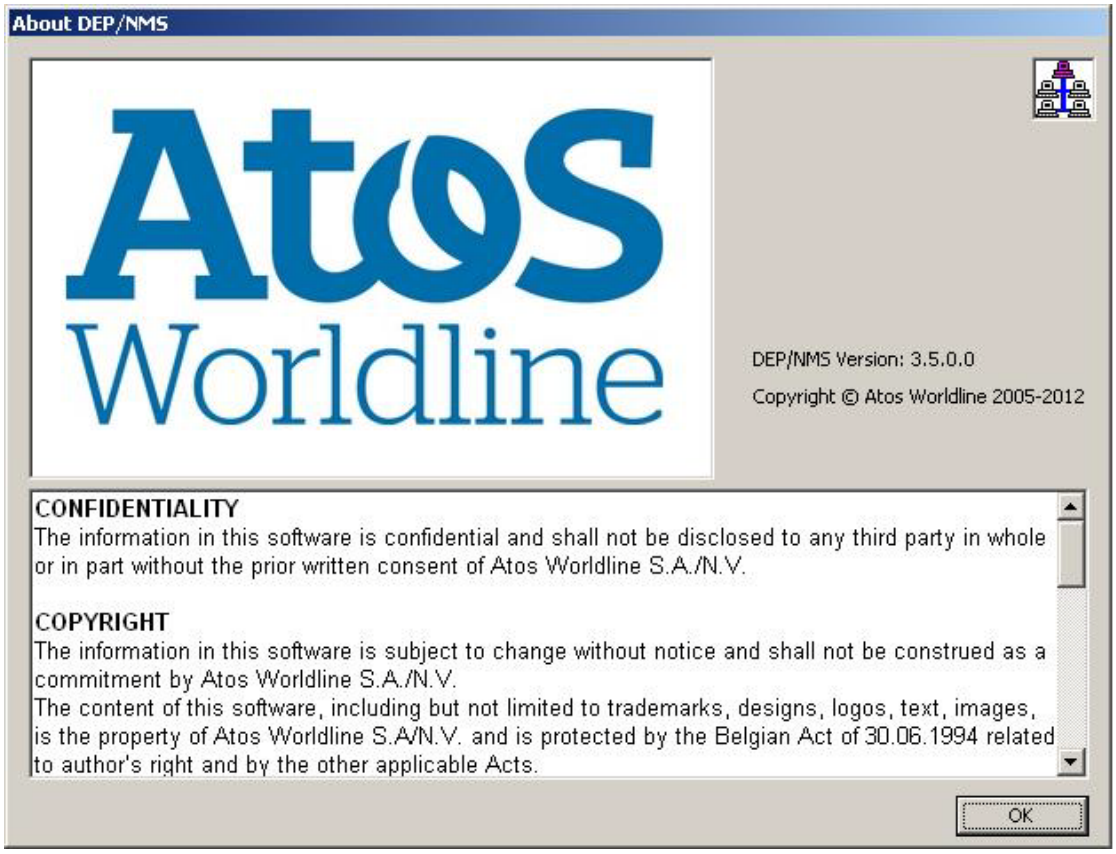

## 13.1. CONSULTING THE ONLINE HELP

To open the online help, select the **Help Topics** function from the **Help** menu or press the corresponding **F1** function key.
The **DEP_NMS help** window will appear, hosting a typical Windows hyperhelp system, which you can navigate and search to consult the information you need..




## 13.2. OBTAINING INFORMATION ON DEP/NMS

When you select the function **About DEP/NMS** from the **Help** menu, the **About DEP/NMS** window will appear with information on the version of the application and with the legal disclaimer and copyrights.


About DEP/NMS
Atos
Worldline
DEP/NMS Version: 3.5.0.0
Copyright © Atos Worldline 2005-2012
CONFIDENTIALITY
The information in this software is confidential and shall not be disclosed to any third party in whole or in part without the prior written consent of Atos Worldline S.A./N.V.
COPYRIGHT
The information in this software is subject to change without notice and shall not be construed as a commitment by Atos Worldline S.A./N.V.
The content of this software, including but not limited to trademarks, designs, logos, text, images, is the property of Atos Worldline S.A/N.V. and is protected by the Belgian Act of 30.06.1994 related to author's right and by the other applicable Acts.
OK

# 14. ANNEX A: INSTALLATION PROCEDURE

An installation procedure is available for the DEP/NMS and DEP/EM applications. It is a wizard-driven procedure that lets you install DEP/NMS, possibly DEP/EM**,** and the License Dongle.
The wizard should normally start automatically and display the **DEP/NMS and DEP/EM Setup Launcher** window, when you insert the installation CD-ROM.

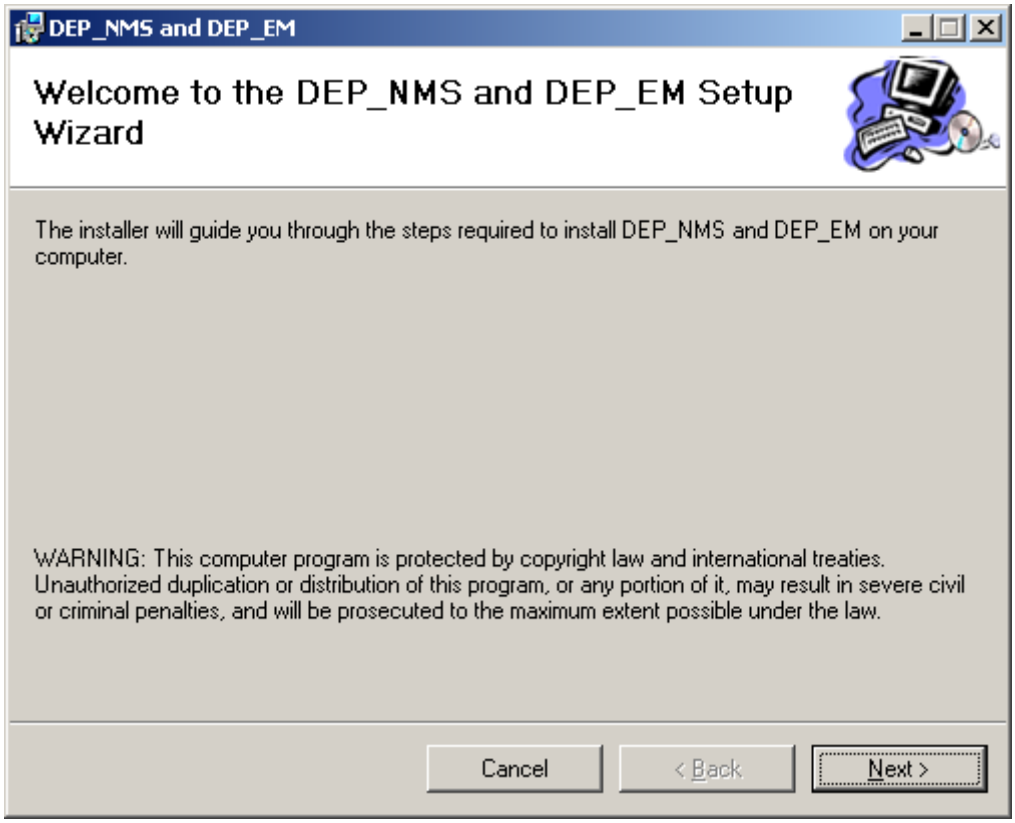

DEP_NMS and DEP_EM
Welcome to the DEP_NMS and DEP_EM Setup Wizard
The installer will guide you through the steps required to install DEP_NMS and DEP_EM on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >

*Figure 8: Installation wizard*

***Notes:***

1. A user must have administrative privileges to be able to start the installation procedure.

2. If the CD-ROM not start automatically, execute `Setup_NMS.exe` on the CD-ROM.

3. This version of the DEP/NMS uses a password to protect the communication between the DEP/NMS and the DEP Platform. If you use an old version (< 2.07), it is recommended to delete the existing file `DEP_NMS.pwd` before installing this new version.

## 14.1. DEP/NMS AND DEP/EM INSTALLATION

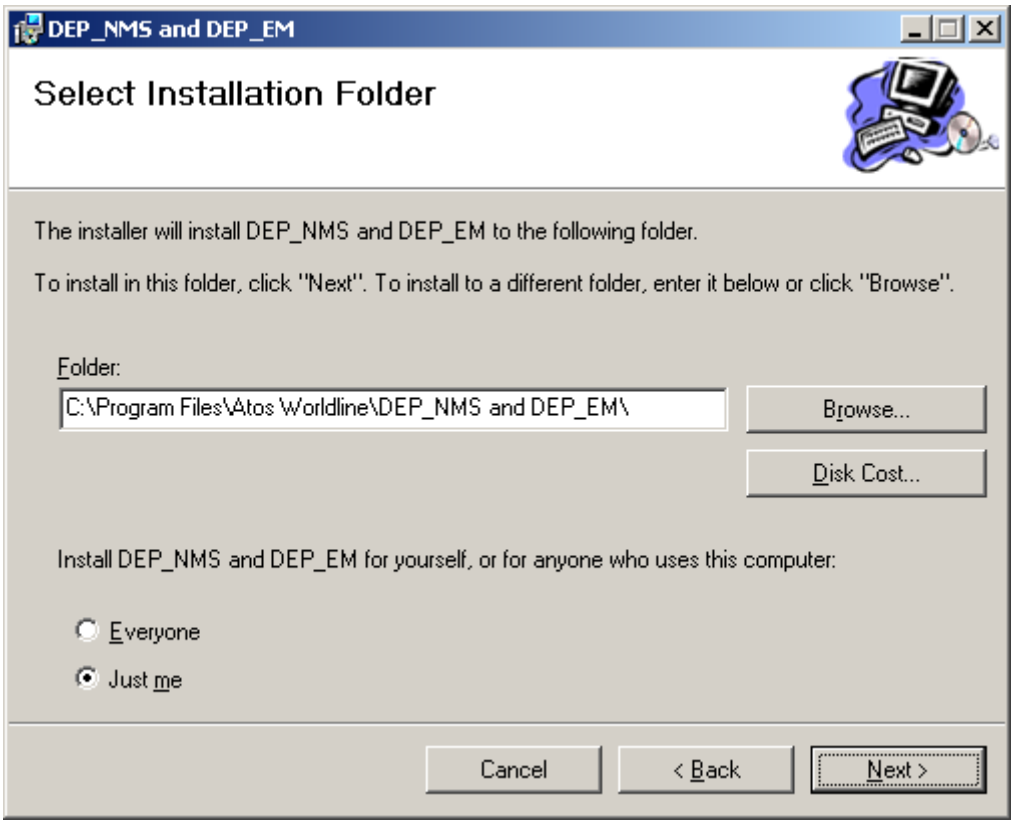
To launch the installation of DEP/NMS and DEP/EM, press the corresponding button in the installation start-up window.

The **Welcome** dialog box appears and you can proceed with the installation by clicking **Next** and following the instructions that the wizard presents.
If, for any reason, you do not want to proceed with the installation, press **Cancel**.

Below is a brief description of the different phases in the installation procedure.

### 14.1.1. Selecting the installation folder

In the **Select Installation Folder** dialog box you have to specify the path to the folder where the DEP/NMS and DEP/EM applications are to be installed.
The default path is `C:\Program Files\Atos Worldline\DEP_NMS and DEP_EM`.


DEP_NMS and DEP_EM
Select Installation Folder
The installer will install DEP_NMS and DEP_EM to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files\Atos Worldline\DEP_NMS and DEP_EM\
Browse...
Disk Cost...
Install DEP_NMS and DEP_EM for yourself, or for anyone who uses this computer:
Everyone
Just me
Cancel
< Back
Next >

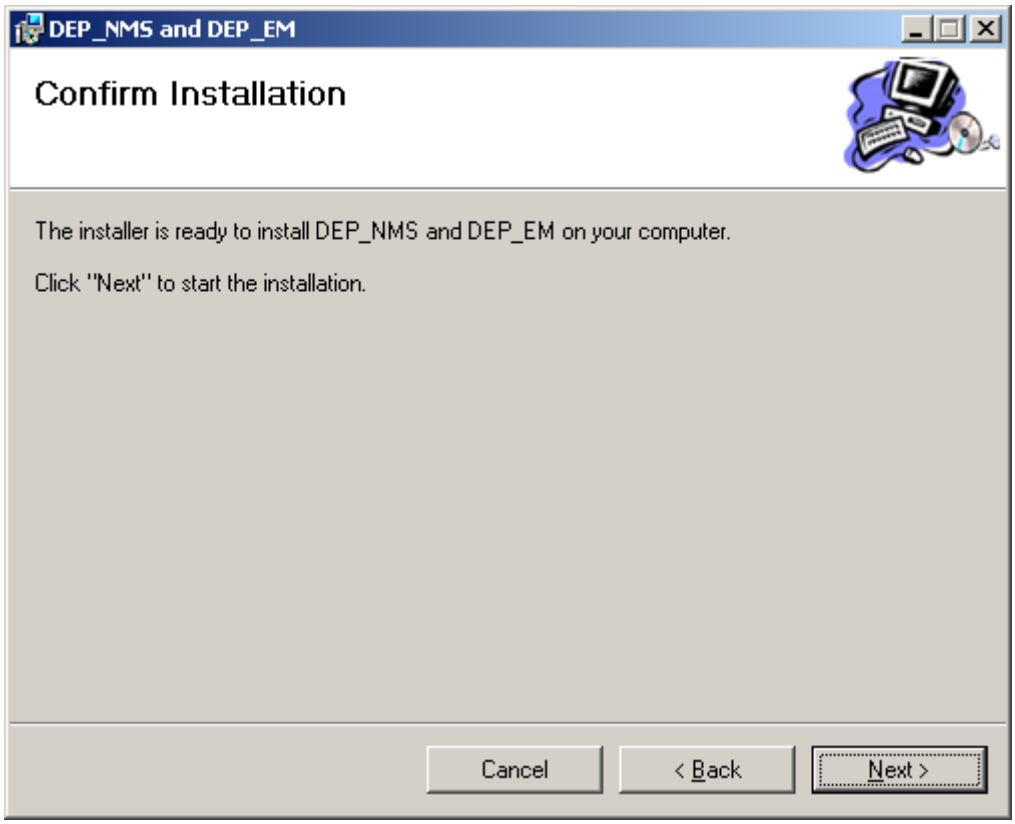
It is recommended to use the default path, yet you can specify a different folder by clicking **Browse** and selecting the desired folder for the installation of the DEP/NMS and DEP/EM applications.

You also need to establish whether you want the application to be available to only one or to all the user of the computer on which you are installing. In the former case you select the option **Just me**, in the latter you select **Everyone**.

Click **Next** to continue.
If you want to return to the previous screen, press **Back** or if you want to abort the procedure, click **Cancel**.

### 14.1.2. Confirming installation

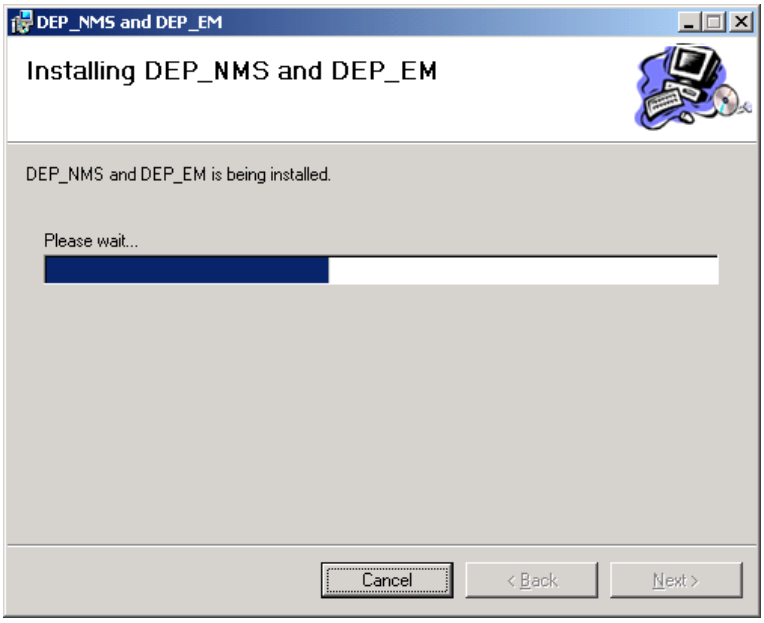
The **Confirm Installation** dialog box gives an overview of the settings selected during the installation procedure.


DEP_NMS and DEP_EM
Confirm Installation
The installer is ready to install DEP_NMS and DEP_EM on your computer.
Click "Next" to start the installation.
Cancel
< Back
Next >

Click **Next** to continue.
If you want to return to the previous screen, press **Back** or if you want to abort the procedure, press **Cancel**.

### 14.1.3. Installing…

Once you have confirmed the installation options, the actual installation starts.
The **Installing DEP_NMS and DEP/EM** dialog box will appear.
A progress bar combined with status information show you how the installation moves on.




### 14.1.4. Installation Complete

When all the files and data have been copied, the **Installation Complete** dialog box appears to notify you of a successful installation.
Click **Close** to exit the installation procedure.

To start the DEP/NMS and DEP/EM applications, the installation procedure creates shortcuts on the Desktop and entries in the Windows **Start** menu.

## 14.2. LICENSE DONGLE INSTALLATION

To start the **License Dongle** installation, press the corresponding key in the installation start-up window.
The **Welcome** dialog box appears, from which you can proceed with the installation by clicking **Next** and following the instructions on the screen.

If, for any reason, you do not want to proceed with the installation, press **Cancel**.

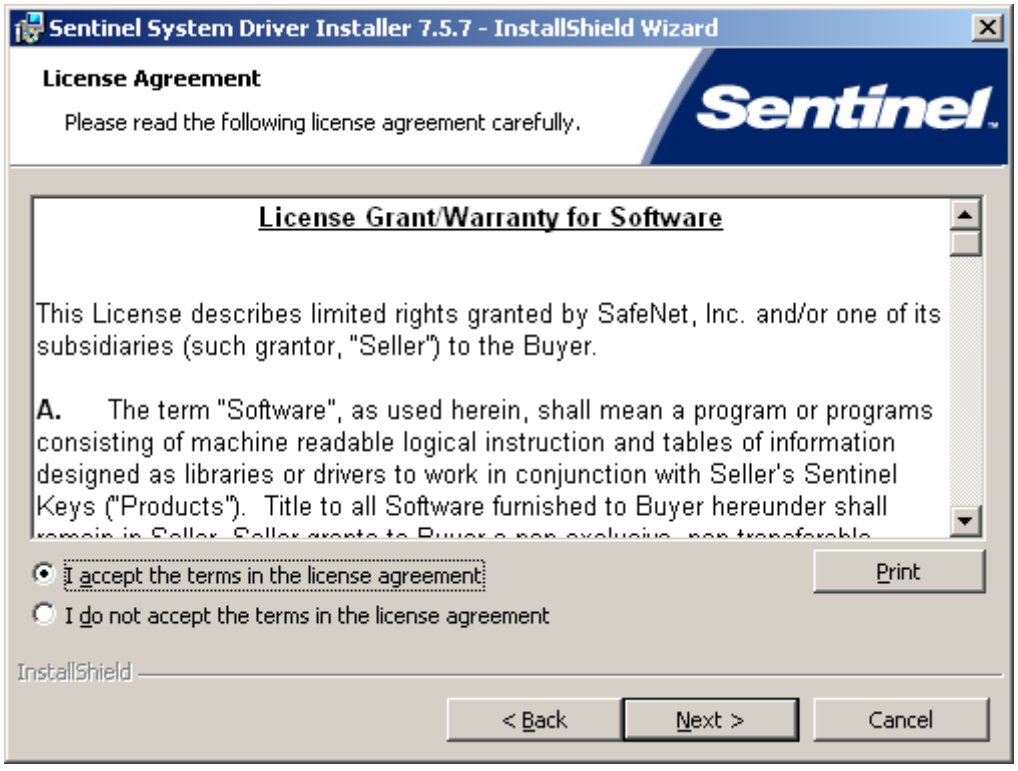
Sentinel System Driver Installer 7.5.7 - InstallShield Wizard
Welcome to the InstallShield Wizard for Sentinel System Driver Installer 7.5.7
The InstallShield(R) Wizard will install Sentinel System Driver Installer 7.5.7 on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
Sentinel
< Back
Next >
Cancel

Below is an overview of the different steps in the installation procedure.

## 14.2.1. Performing preliminary steps

### 14.2.1.1. Accepting license agreement

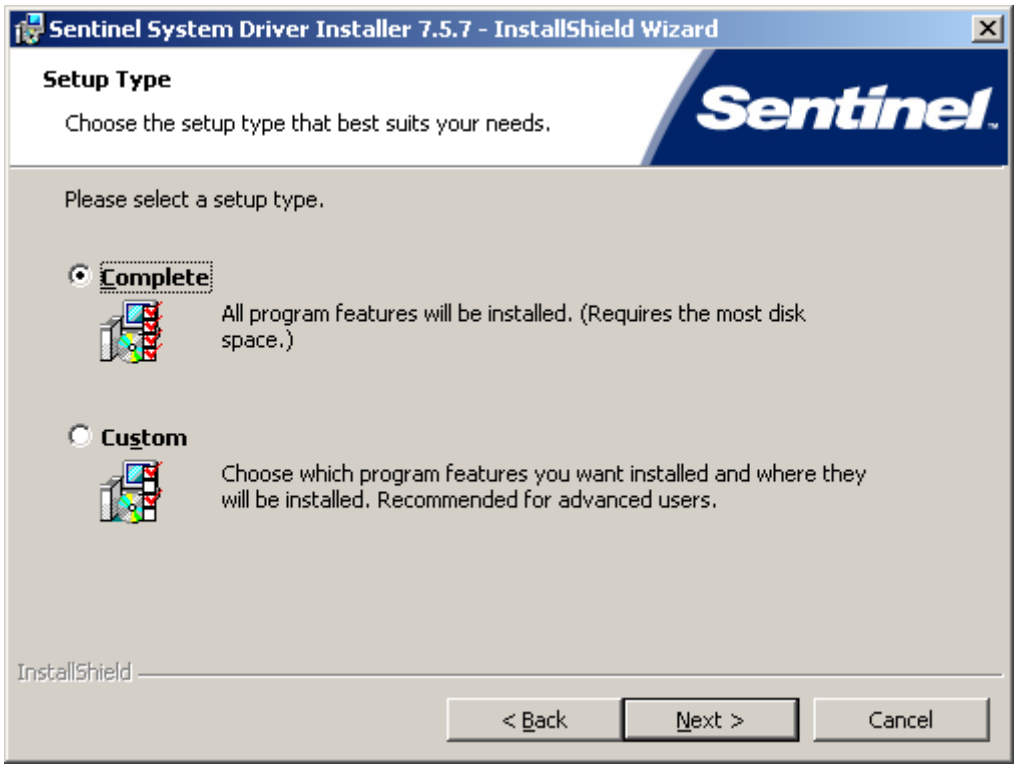
Read and accept the License Agreement and click **Next**.


Sentinel System Driver Installer 7.5.7 - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
Sentinel
License Grant/Warranty for Software
This License describes limited rights granted by SafeNet, Inc. and/or one of its subsidiaries (such grantor, "Seller") to the Buyer.
A. The term "Software", as used herein, shall mean a program or programs consisting of machine readable logical instruction and tables of information designed as libraries or drivers to work in conjunction with Seller's Sentinel Keys ("Products"). Title to all Software furnished to Buyer hereunder shall
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

#### 14.2.1.2. Specifying setup type

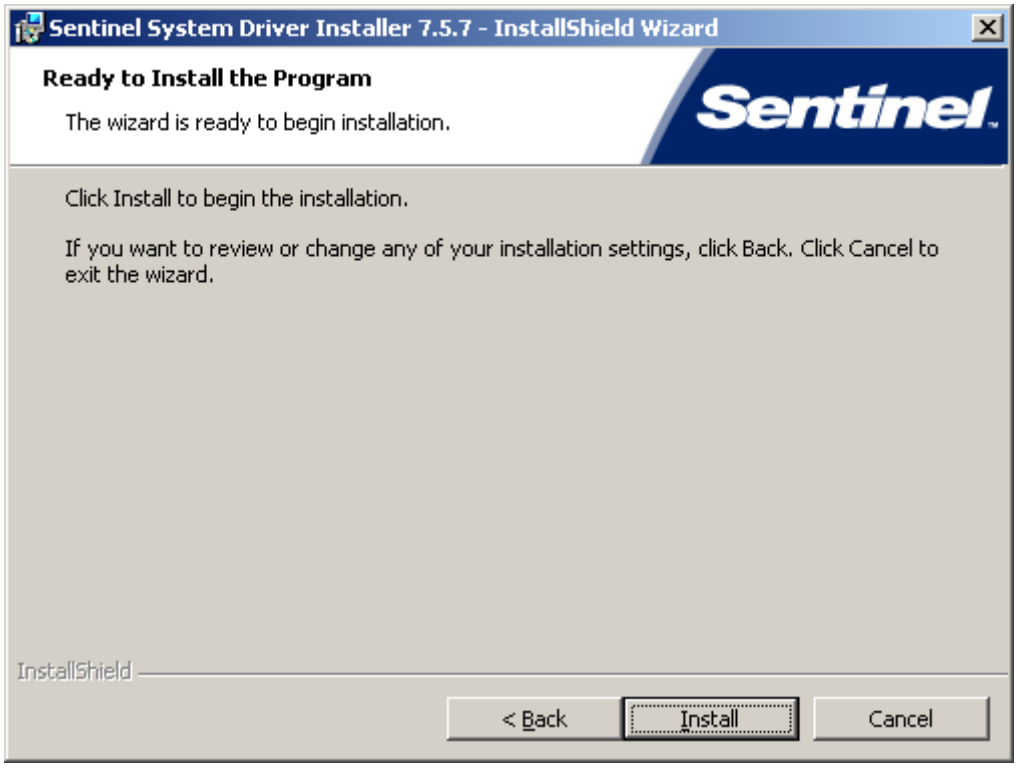
You have to select **Complete** in order to install all the program features.

Press **Next** to continue.


Sentinel System Driver Installer 7.5.7 - InstallShield Wizard
Setup Type
Choose the setup type that best suits your needs.
Sentinel
Please select a setup type.
Complete
All program features will be installed. (Requires the most disk space.)
Custom
Choose which program features you want installed and where they will be installed. Recommended for advanced users.
InstallShield
< Back
Next >
Cancel

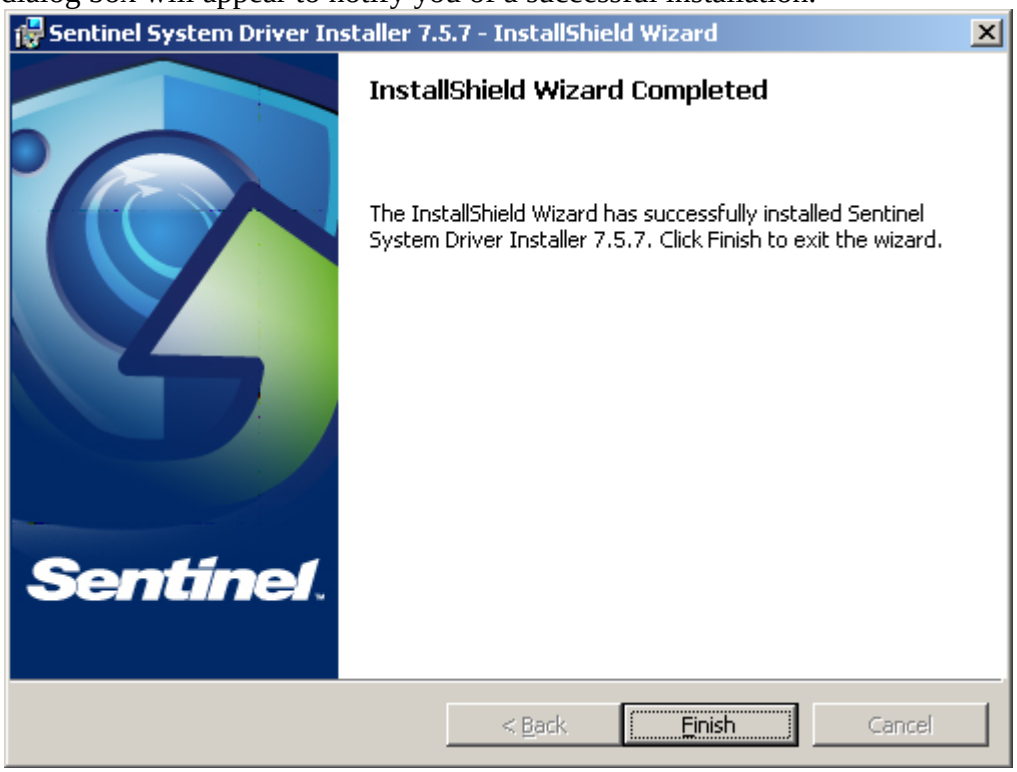
### 14.2.2. Finishing the actual installation

When you have provided all the preliminary information, you can proceed with the actual installation by pressing **Install** on the **Ready to install the Program** dialog box.


Sentinel System Driver Installer 7.5.7 - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Sentinel
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

The **Installing Sentinel SuperPro** dialog box will appear, where a progress bar combined with status information show how the installation moves on.

When all the files and data have been copied, the **InstallShield Wizard Completed** dialog box will appear to notify you of a successful installation.


Sentinel System Driver Installer 7.5.7 - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed Sentinel System Driver Installer 7.5.7. Click Finish to exit the wizard.
Sentinel
< Back
Finish
Cancel

Click **Finish** to exit the installation procedure.

The *hardware license USB dongle* is now available for use.

# 15. ANNEX B: FUNCTION KEYS AND SHORTCUTS

| Key | Use |
|---|---|
| F1 | Opens the help file |
| F2 | Gives the status of the selected DEP Platform |
| F3 | Gives the status of the selected DEP Crypto Module |
| F4 | Opens the audit trail |
| F5 | Refreshes all the content of the window: applies to the main window globally and to the information on the connections of a DEP Platform (Platform Status – Connections) |
| F6 | Refreshes the selected item (DEP Platform or DEP Crypto Module) |
| F7 | Opens the dialog box for adding a new DEP Platform to the configuration |
| F8 | Opens the dialog box for modifying the selected DEP Platform |
| **Shortcut** | **Use** |
| CTRL +N | Opens a new empty configuration |
| CTRL +O | Opens an existing configuration |
| CTRL + S | Saves the current configuration |

# 16. ANNEX C: AUDIT TRAIL OPERATIONS AND EVENTS

| Operation or event |
|---|
| First start, start and stop of the DEP/NMS application |
| Modification of the automatic refresh parameter of the DEP/NMS |
| Clear of alarms on a DEP platform |
| Add, modify or delete a DEP platform from the configuration |
| Open, save and save as of a configuration |
| C-ZAM/DEP actions: message from C-ZAM/DEP to DEP platform 1, DEP Crypto Module 2 |
| Presence of an alert (DEP/NMS initiative or DEP platform initiative) |
| Lock or unlock of a DEP platform |
| Modification in the connections parameters of a DEP platform |
| Modification of an application protocol parameter of a DEP platform |
| Modification of a parameter in the communication protocol of a DEP platform |
| Start, stop and save of trace of a DEP platform |
| Start, stop and save of statistic of a DEP platform |
| Configuration of a DEP Crypto Module |
| Load and end of applications of a DEP Crypto Module |
| Backup, restore and save info of keys of a DEP Crypto Module |
| Save info of capabilities of a DEP Crypto Module |
| Save info of counters of a DEP Crypto Module |

| |
|---|
| Make diagnostics on a DEP Crypto Module |
| Reset a DEP Crypto Module |
| Modifying a DEP application parameter on a DEP Crypto Module |
| Modifying the Real Time Clock of a DEP Crypto Module. |